GRANULAR POLYTETRAFLUOROETHYLENE RESIN FROM ITALY AND JAPAN

Determination of the Commission in Investigations Nos. 731-TA-385 and 386 (Final) Under the Tariff Act of 1930, Together With the Information Obtained in the Investigations

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UNITED STATES INTERNATIONAL TRADE COMMISSION

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Staff assigned:

Jonathan Seiger, Investigator
Edward Taylor, Industry Analyst
Stephanie Van-Winkle, Economist
Chandrakant Mehta, Financial Analyst
Judith Czako, Attorney

Robert Carpenter, Supervisory Investigator

Address all communications to
Kenneth R. Mason, Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

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Note.--Information that would reveal the confidential operations of individual concerns may not be published and, therefore, has been deleted from this report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Investigations Nos. 731-TA-385 and 386 (Final)

GRANULAR POLYTETRAFLUOROETHYLENE RESIN FROM ITALY AND JAPAN

Determinations

On the basis of the record 1/ developed in the subject investigations, the Commission unanimously determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)), that an industry in the United States is materially injured by reason of imports from Italy and Japan of granular polytetrafluoroethylene resin, provided for in item 445.54 of the Tariff Schedules of the United States (TSUS), that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).

Background

The Commission instituted these investigations effective April 19, 1988, following preliminary determinations by the Department of Commerce that imports of granular polytetrafluoroethylene resin from Italy and Japan were being sold at LTFV within the meaning of section 731 of the Act (19 U.S.C. § 1673). Notice of the institution of the Commission's investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of May 4, 1988 (53 FR 15902). The hearing was held in Washington, DC, on July 13, 1988, and all persons who requested the opportunity were permitted to appear in person or by counsel.

1/ The record is defined in sec. 207.2(i) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(i)).

VIEWS OF THE COMMISSION

On the basis of the record in these final investigations, we determine that the domestic industry producing granular polytetrafluoroethylene resin (granular PTFE) is materially injured by reason of imports from Italy and Japan that the Department of Commerce has determined are sold at less than fair value (LTFV).

Like Product and the Domestic Industry

As a prerequisite to the Commission's material injury analysis, the Commission must define the relevant domestic industry. Section 771(4)(A) of the Tariff Act of 1930 (the Act) defines the domestic industry as the "domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product." [1/] "Like product," in turn, is defined as "[a] product that is like, or in the absence of like, most similar in characteristics and uses with the article subject to investigation . . . ." [2/]

The imported product subject to these investigations is all granular PTFE resin imported from Japan and Italy, both filled and unfilled. [3/] PTFE

1/ 19 U.S.C. § 1677(4)(A).

2/ 19 U.S.C. § 1677(10).

3/ Notice of final determination of LTFV imports from Japan, 53 Fed. Reg. 25191 (July 5, 1988); Notice of final determination of LTFV imports from

(Footnote continued on next page)

resin, a high-performance plastic used to make articles for a variety of primarily industrial applications, offers a unique combination of chemical and physical properties. It has excellent dielectric properties that make it a good insulator and excellent antistick properties, it will not support combustion, and it maintains these qualities over a broad range of temperatures.

All PTFE resins are produced from a common feedstock, the monomer tetrafluoroethylene (TFE). 4/ Granular PTFE is produced by suspension polymerization, a process involving vigorous agitation to produce a precipitated resin. The process produces string-like particles of raw polymer, which are wet-cut to achieve desired particle size and then pelletized (agglomerated) and dried. 5/ The pelletized resin can be ground to produce "fine-cut" granular PTFE, or ground and heated to just below the

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(Footnote continued from previous page)
Italy, 53 Fed. Reg. 26096 (July 11, 1988). The two other products in the family of PTFE polymers--PTFE aqueous dispersions and PTFE fine powders--are not covered by this investigation. These two products were excluded from the scope of the petition, Petition at 7, and Commerce has stated that they are not within the scope of these investigations. 53 Fed. Reg. 25191, 26097. No party has argued that these two products should be included within the like product.

4/ Report of the Commission (Report) at A-5. A number of other products, not subject to these investigations, are also produced from the monomer TFE.

5/ Id. at A-5. Fine powder and aqueous dispersion PTFE are produced by aqueous dispersion polymerization, using different equipment than for suspension polymerization, and are finished on different equipment than granular PTFE resin. Id. at A-4, Memorandum EC-L-270, August 5, 1988, at 8 n.2.

melting point to produce "presintered" granular PTFE. [6/] Thus, granular PTFE resin comes in three general product types or grades--pelletized, fine cut, and presintered. [7/] Most of the production process for all three grades is carried out by the same employees on the same equipment. [8/]

Granular PTFE resin can be compounded with additives such as carbon, graphite, glass fibers, or pigments to enhance mechanical properties such as wear resistance. [9/] Compounding results in what is referred to as "filled" granular PTFE resin. [10/] Filled granular PTFE resin is most commonly made from fine cut grade PTFE, although all three grades of granular PTFE resin can be compounded with fillers. [11/]

The vast majority of granular PTFE, both filled and unfilled, is sold to processors who mold the resin into finished shapes such as gaskets, seals, and bearings, or make stock shapes such as rod or billets to be further machined. These are then sold to end users for use in the manufacture of such products as automobiles, chemical plant equipment, and food-processing

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6/ "Sintering" involves the welding together of plastic particles at temperatures just below the resin's melting point. Report at A-3, n.3.

7/ Id. at A-3.

8/ Id. at A-5.

9/ Id. See Transcript of Commission Hearing (Tr.) at 128.

10/ Report at A-5.

11/ Id. at A-4. In addition, a filled fine cut PTFE resin can subsequently be presintered if desirable for processing.

machinery. 12/ Because of its high molecular weight and melt viscosity, granular PTFE resin, whether filled or unfilled, must be molded or extruded under pressure and sintered at high temperatures. The molding and extrusion methods used to fabricate articles from granular PTFE are similar to those used with powdered metals and ceramics. 13/

Du Pont argues that the domestic product like the imported articles in these investigations is a single continuum of all varieties or grades of granular PTFE. ICI Americas, Inc. (ICI) supports this argument. Respondent Ausimont U.S.A. (Ausimont) argues that there are two domestic products like the imported articles, (1) unfilled granular PTFE resin of all grades, 14/ and (2) all filled granular PTFE resin, regardless of the type or amount of filler. 15/ Respondent Daikin Industries, Ltd. (Daikin) does not take any position on the like product issue, stating that since Daikin does not import

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12/ Report at A-12.

13/ Id. at A-6.

14/ In the preliminary investigations, Ausimont argued that the three standard grades, pelletized, fine-cut, and presintered granular PTFE resin were distinct like products. Ausimont apparently has abandoned this argument in these final investigations. Tr. at 107; Ausimont's Post-Hearing Brief at 1.

15/ Ausimont has suggested that in order to avoid a potential circumvention problem raised by Du Pont, the Commission could conclude that filled granular PTFE resin containing less than 5 percent filler (whether by weight, volume, or value is not specified) should be categorized as unfilled for purposes of the like product analysis. Since we find that there is one like product, we need not reach this issue. However, we note that we cannot discern, and Ausimont has not suggested, any support in the record for the proposition that a compounded PTFE resin containing less than 5 percent of a filler material is any less "filled" than one containing more than 5 percent filler material. Ausimont itself sells a product containing only 3 percent filler material, by weight, which it identifies as "Filled Algoflon." Ausimont Pre-Hearing Brief at attachment 7.

filled granular PTFE resin, the Commission's determination on this issue is immaterial to Daikin's interests. 16/

The Commission's decision regarding the appropriate like product is essentially one to be based on the unique facts of each case. 17/ Factors the Commission examines in deciding the appropriate like product include: (1) physical characteristics and uses, (2) interchangeability, (3) channels of distribution, (4) common manufacturing facilities and production employees, and (5) customer or producer perceptions. 18/ No single factor is dispositive, and the Commission may consider other factors that it deems relevant based on the facts of a given investigation. 19/ In addition, we note that the like product determination should not be fashioned to achieve a particular result. 20/

The Commission has found minor variations to be an insufficient basis for a separate like product analysis. 21/ Instead, it looks for clear dividing

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16/ Tr. at 158.

17/ Associacion Colombiana de Exportadores de Flores, et al. v. United States, et al., Slip Op. 88-91 (July 14, 1988) at 9 (hereinafter ASOCOLFLORES).

18/ See e.g., Nitrile Rubber from Japan, Inv. No. 731-TA-384 (Final), USITC Pub. 2090 (June 1988).

19/ For example, another factor sometimes cited as bearing on the like product issue is similarity in price. ASOCOLFLORES, Slip Op. 88-91 at 12, n.8.

20/ ASOCOLFLORES, Slip Op. 88-91 at 9.

21/ It is up to the Commission to determine objectively what is a minor difference. Id. at 9.

lines among products. 22/ In addition, in cases concerning the question of whether semifinished or component articles are "like" the finished product, the Commission considers such factors as: (1) the necessity for further processing, (2) the costs of such processing and the value added thereby, (3) whether the article at an earlier stage of production embodies or imparts to the finished article an essential characteristic or function, (4) whether there are independent markets for the finished and unfinished articles, and (5) the degree of interchangeability of articles at the various stages of production. 23/

The like product issue in this investigation involves a determination of whether unfilled and filled granular PTFE are a single like product or two distinct like products. The arguments of the parties were largely focused on the question of the substitutability of filled and unfilled PTFE in various applications.

Unfilled PTFE is the basic component of all filled resin, although the nature, volume, and value of the fillers differs. Filled and unfilled resin are manufactured by different processes: unfilled PTFE manufacture is initially a chemical process, followed by drying, grinding, and baking, to

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22/ See, e.g., Operators for Jalousie and Awning Windows from El Salvador, Inv. Nos. 701-TA-272 and 731-TA-319 (Final), USITC Pub. 1934 at 4, n.4 (1985). While the Commission need not investigate every possibility relating to product categories, it is clear that the Commission must articulate sufficient grounds in support of its determination. See ASOCOLFLORES, Slip Op. 88-91 at 13.

23/ Thermostatically Controlled Appliance Plugs and Probe Thermostats Therefor from Canada, Hong Kong, Japan, Malaysia, and Taiwan, Invs. Nos. 701-TA-290-292 and 731-TA-400-404 (Preliminary), USITC Pub. 2087 at 5-6 and cases cited at n.8 (June 1988).

produce the three standard grades; while filled PTFE manufacture is a mechanical operation devoted to evenly compounding an unfilled resin with filler materials of differing types and quantities, similar to evenly distributing baking powder and salt in flour before baking. 24/ The two operations are carried out on different equipment. In the United States, the manufacture of filled and of unfilled PTFE are carried out in physically and geographically separate establishments, although this appears to be an accident of corporate development rather than a requirement of the production processes. 25/

The physical characteristics and uses of filled and unfilled PTFE are both similar and different, depending on one's perspective. Filled PTFE resins retain the desirable qualities of unfilled PTFE to various degrees, while meeting the additional requirements of various applications. 26/ Different fillers in varying proportions impart qualities to, or enhance

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24/ There are two common methods of compounding granular PTFE to produce filled PTFE. Report at A-5.

25/ Du Pont does not produce filled resin. ICI purchased its filling operations, which had previously been independent, and which are in different locations from its unfilled manufacturing operation. In Great Britain, ICI's filled and unfilled operations are in the same location, and employees are interchangeable. Tr. at 92. Ausimont manufactures unfilled granular PTFE in facilities in Elizabeth, New Jersey, and filled granular PTFE at facilities in Metuchen, New Jersey. Ausimont acquired both facilities from Allied-Signal Co. in June 1986. There are four major "compounders" of filled PTFE which purchase unfilled resin from various sources and produce either standard or custom varieties of filled PTFE for sale to largely unrelated purchasers. In addition, it appears that many purchasers of unfilled PTFE have filling operations of their own, producing compounded resin for their own processing operations. Report at A-8; Tr. at 8; Du Pont Pre-Hearing Brief at 19.

26/ Report at A-5.

certain qualities of, the unfilled PTFE, particularly mechanical qualities such as wear resistance. [27/] Fillers, however, may be added merely to impart color so that the ultimate end user can identify the source or dimensions of products. [28/] Both filled and unfilled PTFE are processed into various articles of trade on the same types of processing equipment. Many of these articles can be produced from either unfilled PTFE or various filled PTFE resins, depending on the specific qualities desired for the intended use of the article. [29/]

Interchangeability of filled and unfilled resin also varies with one's perspective. The choice of unfilled or a specific filled PTFE for production of a specific part depends largely on the intended use for the part and the qualities necessary for that end use. [30/] It appears that for at least some end uses, filled and unfilled PTFE are interchangeable. [31/] However, for most end uses, a specific resin, either unfilled or compounded with a specific amount of a particular filler or fillers, is necessary to ensure that the

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27/ Report at A-5.

28/ Id.

29/ See Exhibit II.2 to Du Pont Post-Hearing Brief.

30/ Report at A-5, n.1. The initial decision, whether or not to use a PTFE resin of any type, depends on whether the unique qualities of PTFE are needed in the particular intended use. Since PTFE resin is relatively expensive, if their unique qualities are not required a less expensive material will be used. Memorandum EC-L-270, August 5, 1988, at 31.

31/ Du Pont Post-Hearing Brief at Part II-C, Section II, and Exhibit II.2.

finished part has the desired qualities. 32/ In addition, the different grades, pelletized, fine-cut, and presintered, are not fully interchangeable in various processing technologies. To a large degree, the desired qualities of the end-use article and the most cost-effective method of producing that article determine a particular processing method and a particular resin selection. 33/ Once that decision is made, interchangeability is very limited if at all possible. However, during the design process of the final product into which the PTFE part will be incorporated, there appears to be at least some degree of interchangeability between unfilled resin and filled PTFE of various types.

U.S.-produced and imported granular PTFE are sold through similar channels of distribution to similar markets. There are no known uses for granular PTFE resin that have not been manufactured into articles of trade, and there are no known independent distributors of granular PTFE resin, either filled or unfilled. 34/ The vast majority of granular PTFE, both filled and unfilled, is sold to processors who manufacture different end-use articles.

While unfilled granular PTFE is the primary component of filled PTFE resin, the "need" for further processing, i.e. filling, depends on the intended end use of the manufactured part. In other words, where the unique qualities of unfilled PTFE are desirable, further processing is not required,

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32/ See e.g., Tr. at 127-128, 144.

33/ Different processing methods are most cost effective for production of different types of end-use articles. See Report at A-3; Transcript of Preliminary Conference at 134-35.

34/ Report at A-12.

and where certain unique qualities of a filled resin are desirable, further processing is necessary in order to achieve the proper compound.

The costs of filling vary depending on the value and amount of the particular filler material. Compared to the costs of manufacturing the unfilled resin, the costs of compounding, exclusive of material costs, are low. 35/ Equipment for filling operations is significantly less expensive than equipment for manufacture of unfilled resin. 36/

As noted above, the unique properties of PTFE are imparted to filled PTFE in different degrees, depending on the nature and amount of filler added. Thus, unfilled PTFE which is compounded with an inert pigment will, for the most part, embody all the unique qualities of the unfilled resin. However, a filled PTFE resin incorporating 25 percent glass, a common filled PTFE, will exhibit the unique properties of unfilled PTFE to a lesser extent, while exhibiting additional properties attributable to the filler material. With the exception of compounders of filled resin who purchase only unfilled resin, filled and unfilled resin are sold in the same market, to processors who manufacture end-use products. The degree of interchangeability of filled and unfilled resin varies, depending on the perspective, as discussed above.

On balance, we determine that all granular PTFE resin constitutes a single like product. All granular PTFE resin incorporates those unique qualities that lead purchasers to select a granular PTFE resin rather than a

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35/ Tr. at 7.

36/ Du Pont Pre-Hearing Brief at 20. Production technology for filled PTFE production is much less capital intensive than that for unfilled granular PTFE production. Memorandum EC-L-270, August 5, 1988, at 5 n.1.

less expensive alternative. The further choices, of unfilled resin of a particular grade or a particular compound of filled resin of a particular grade, are determined by the user's specific requirements for the finished part and processing technologies. The primary distinction between filled and unfilled granular PTFE resin lies in the relative lack of substitutability at the processing stage for manufacture of different end-use articles.

In previous chemical cases the Commission has not found lack of complete substitutability in various uses to be a sufficient basis for a determination of separate like products. We do not believe that the limited substitutability of filled and unfilled resin alone constitutes a sufficient basis for separate like product determinations in this case. 37/ Different compounds of filled PTFE are equally not substitutable for each other in various applications, and different grades of unfilled granular PTFE are not fully substitutable for each other in various processing technologies. For example, although a filled resin of 25 percent glass/75 percent fine cut granular PTFE might not be an acceptable substitute for unfilled fine cut granular PTFE in the same application, neither would a filled resin of 25 percent carbon/75 percent fine cut granular PTFE. Thus, in this case, we believe that a distinction solely between "filled" and "unfilled" granular PTFE, without further distinguishing different grades of unfilled granular PTFE and different formulas of filled PTFE, would be inappropriate.

37/ The Court of International Trade recently cautioned against reliance on consumer preferences as a sole basis for making like product distinctions. ASOCOLFLORES, Slip Op. 88-91 at 7. While the lack of substitutability in this case does not derive from consumer preferences so much as from the specific needs of consumers for a particular resin to produce a given part using a given production technology, we believe that these specific needs alone are not a sufficient basis for like product distinctions in this case.

Related parties

Du Pont, the petitioner, is part of a joint venture in Japan that produces granular PTFE. 38/ Du Pont imports a small amount of granular PTFE from this joint venture company. 39/ Ausimont is both a domestic producer of granular PTFE and an importer of granular PTFE that is manufactured in Italy by a related corporation. 40/ ICI also imports small amounts of granular PTFE from a joint venture in Japan of which its parent company is a part. 41/ The statute permits the Commission to exclude from the domestic industry producers that are also importers, or that are related to importers or foreign exporters, in "appropriate circumstances." 42/

Application of the related parties provision is within the Commission's discretion based on the facts presented in each case. 43/ The Commission has stated previously that domestic producers that substantially benefit from

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38/ Report at A-14.

39/ Id. at A-15.

40/ Ausimont is owned by a holding company, Ausimont N.V., which is in turn owned by the Italian chemical conglomerate, Montedison S.p.A. Montedison owns Montefluos S.p.A., a producer and exporter of granular PTFE in Italy.

41/ Id. at A-15, A-54.

42/ 19 U.S.C. § 1677(4)(B) provides that "[w]hen some producers are related to the exporters or importers, or are themselves importers of the allegedly subsidized or dumped merchandise, the term 'industry' may be applied in appropriate circumstances by excluding such producers from those included in that industry."

43/ Empire Plow Co., Inc. v. United States, 11 CIT ___, 675 F. Supp. 1348, 1352 (1987).

their relation to the subject imports are properly excluded as related parties. 44/ Factors the Commission examines include:

(1) the position of the related producers vis-a-vis the rest of the domestic industry;

(2) the reasons why the domestic producers have chosen to import the product under investigation--to benefit from the unfair trade practice, or to enable them to continue production and compete in the domestic market; and

(3) the percentage of domestic production attributable to the related producers. 45/

Du Pont accounts for the majority of all U.S. production of granular PTFE. 46/ As such, its data are essential to the Commission's injury analysis in this case. Moreover, Du Pont's imports from its Japanese joint venture are negligible in volume 47/ and the majority of those imports are reexported to markets outside Europe and Japan. 48/ Similarly, ICI is a major domestic producer of both filled and unfilled granular PTFE, and its imports are negligible in volume. There is no indication in the record that either company benefits from its related party status. Thus, we determine that Du Pont and ICI should not be excluded under the related parties provision.

44/ See, e.g., Rock Salt from Canada, Inv. No. 731-TA-239 (Final), USITC Pub. 1798 (1986).

45/ Id. See Empire Plow Co. v. United States, 675 F. Supp. at 1353-54 (Commenting, with respect to factors (1) and (2) that "[t]his is a reasonable approach when viewed in light of the legislative history. . . .")

46/ Report at A-13.

47/ Compare table at A-20 of the Staff Report in the preliminary investigation with table 3 at A-14 of the Staff Report in the preliminary investigation.

48/ Id. at A-20.

The answer is less clear with regard to Ausimont, which acquired the filled and unfilled granular PTFE production facilities of Allied-Signal Corp. in New Jersey in June 1986. Ausimont began producing granular PTFE in the United States shortly thereafter and in 1987 accounted for a significant percentage of U.S. production of both filled and unfilled granular PTFE. 49/ Ausimont is the only significant importer of granular PTFE from Italy, and Montefluos S.p.A., its sister company, is the only known producer of granular PTFE in Italy.

Ausimont did not ask to be excluded from the domestic industry on the basis of the related parties provision. It did, however, ask the Commission to consider its position along with data on its operations and the possible effects of imports separately and/or differently from that of Du Pont and ICI. In support of its contention, Ausimont submitted evidence that its acquisition of the Allied-Signal facilities is part of a strategic plan for its PTFE business in the United States.

Ausimont clearly has interests as an importer of granular PTFE from Italy. On the other hand, it already represents a significant portion of U.S. production of both filled and unfilled granular PTFE, has made a significant commitment to U.S. production, 50/ and thus clearly has interests as a U.S. producer. We therefore determine not to exclude Ausimont from the domestic industry under the related parties provision.

We therefore determine that the domestic industry includes the U.S. producers of granular PTFE resin, both unfilled and filled. There are three

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49/ Report at A-14.

50/ Id. at A-46.

U.S. producers of unfilled granular PTFE, Du Pont, ICI, and Ausimont, and four major producers of filled granular PTFE, ICI, Ausimont, Whitford Polymers, and Custom Compounding, Inc.

Condition of the Industry

In evaluating the condition of the domestic industry, the Commission generally considers, among other factors, domestic consumption, production, capacity, capacity utilization, shipments, inventories, employment, and financial performance. 51/ No single factor is determinative, and in each investigation the Commission must consider the particular nature of the relevant industry in making its determination.

In these final investigations, the Commission considered information for the years 1985 through 1987, and the interim periods January through March 1987 and 1988. 52/ The information on the record indicates that despite

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51/ 19 U.S.C. § 1677(7)(C)(iii).

52/ The Commission also gathered information concerning U.S. producers' shipments of granular PTFE for the period 1981 through 1984. Although we have not relied on this information to any significant degree in making our determination, we note that such longer period information is often helpful in understanding the dynamics of an industry. Contrary to arguments made by some parties in the preliminary investigations, the Commission's general practice of collecting information for a three-year period in no way limits the Commission's authority to collect or consider information for a longer or shorter period, as may be appropriate in a given case. See Kenda Rubber Co. v. United States, 10 CIT ___, 630 F. Supp. 354 (1986) (the Court does indicate that normally the Commission should examine a time period close to that examined by Commerce); Yuasa-General Battery Corp. v. United States, 11 CIT ___, 661 F. Supp. 1214 (1987) (Court affirmed Commission determination of no reasonable indication of material injury based, in part, on comparison of data during current three year period of investigation with data from an earlier investigation of the same industry). See e.g., Portland Hydraulic

(Footnote continued on next page)

rapidly increasing consumption, the principal economic indicators of the industry's performance deteriorated during the period of investigation, most particularly in 1987. Those same indicators demonstrate a dramatic improvement in the industry's performance in first quarter 1988 as compared with first quarter 1987. In our opinion, this improvement is in part attributable to the institution of these investigations and our preliminary affirmative determinations in December 1987, and therefore does not detract from our conclusions concerning the effect of imports on the domestic industry.

Apparent U.S. consumption of granular PTFE increased substantially during the period, from 10.9 million pounds in 1985 to 13.7 million pounds in 1987, and from 3.4 million pounds during the interim 1987 period to 4.3 million pounds in interim 1988. 53/ U.S.-produced domestic shipments, however, did not increase as much as consumption, increasing from 8 million pounds in 1985 to 9.8 million pounds in 1987, and from 2.3 million pounds in interim 1987 to

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(Footnote continued from previous page)
Cement and Cement Clinker from Colombia, France, Greece, Japan, Mexico, the Republic of Korea, Spain, and Venezuela, Invs. Nos. 731-TA-356-63 (Preliminary), USITC Pub. 1925 (Dec. 1986); Color Television Receivers from the Republic of Korea and Taiwan, Inv. No. 731-TA-134 (Final), USITC Pub. 1514 at 15, n.55 (1984) (Commission considered earlier financial data); Potassium Chloride from Canada, Inv. No. 731-TA-374 (Preliminary), USITC Pub. 1963 (1987) (Commission had longer data series in some categories due to earlier investigations; Commission based determination on a reasonable indication of material injury during the period of investigation; conditions and trends followed those from earlier periods).

53/ Report at A-9. Apparent consumption of filled granular PTFE increased more rapidly during this period, although apparent consumption of unfilled granular PTFE also increased. Id. at A-10-A-11.

3.2 million pounds in interim 1988. 54/ U.S. producers' share of apparent consumption increased slightly from 1985 to 1986, from 73.2 percent to 74.0 percent, before dropping to 71.5 percent in 1987. 55/

U.S. capacity to manufacture granular PTFE increased annually from 15 million pounds in 1985 to 18 million pounds in 1987, and rose again slightly in the interim periods. 56/ Capacity increases between 1985 and 1986 are largely attributable to the entry of Whitford Polymers into the filled sector of the industry, and an expansion of filled capacity; capacity increases for facilities producing only unfilled granular PTFE were small. 57/ Overall, capacity utilization for granular PTFE production fell from 74 percent in 1985 to 64 percent in 1987, before increasing to 82 percent in the interim period 1988. 58/

U.S. producers' inventories rose from 1985 to 1986, before dropping

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54/ Report at A-9.

55/ Id. at A-62. U.S. producers' market share increased in the interim periods, from 68.9 percent in interim 1987 to 75.5 percent in interim 1988. Id.

56/ Id. at A-17.

57/ Id. at A-16.

58/ Id. at A-18. Capacity utilization for filled granular PTFE production changed little during the period, except for a 7 percent increase in interim 1988 as compared with interim 1987. Capacity utilization for unfilled granular PTFE production declined steadily from 79 percent in 1985 to 66 percent in 1987, before increasing markedly to 91 percent in interim 1988 from 65 percent in interim 1987. Id. Since the institution of these investigations, both Du Pont and ICI have announced plans to expand capacity. Id. at A-19, n.1.

sharply in 1987, [59/] and again between interim 1987 and interim 1988. [60/] Inventory figures for unfilled granular PTFE showed a similar trend, while inventories of filled granular PTFE increased from 1985 to 1986, decreased slightly in 1987, and increased again slightly between interim 1987 and interim 1988. [61/] [62/]

The number of workers engaged in the production of granular PTFE increased from 181 in 1985 to 201 in 1986, declined to 198 in 1987, and then increased again in interim 1988 (to 200 workers compared to 189 workers during interim 1987). The number of hours worked by these employees increased by 1.9 percent from 1985 to 1986, but declined to virtually the 1985 level in 1987. Labor productivity exhibited an overall decline of 11 percent from 1985 to 1987, before increasing by 27 percent in interim 1988. [63/]

The trend in employment in production of unfilled granular PTFE was similar: a slight increase from 1985 to 1986 and a decline in 1987, resulting in an overall decline of 6.1 percent. [64/] Hours worked declined steadily from 1985 to 1987, before increasing 8.3 percent in interim 1988, compared to

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59/ Report at A-28.

60/ Id.

61/ Id.

62/ Commissioners Eckes and Rohr note that they focused their analysis on the data for the granular PTFE resin industry and that separate data for the filled and unfilled PTFE components of the domestic industry did not affect their determination.

63/ Id. at A-30.

64/ Id. at A-32.

interim 1987. Labor productivity declined 19 percent between 1985 and 1987, and then increased by over 35 percent between interim 1987 and interim 1988. 65/ We note that because unfilled granular PTFE production is a continuous process, with equipment operating 24 hours a day, seven days a week, labor is a relatively fixed cost. Thus, declines in production are reflected more in labor productivity than in actual numbers of employees or hours worked. With respect to filled granular PTFE production, the number of workers, hours worked, and labor productivity all showed increases throughout the period. 66/

Income and loss data for granular PTFE operations, both filled and unfilled, show a decline in total net sales from $58 million in 1985 to $52 million in 1986, an increase to $54 million in 1987, 67/ and an increase again to $21 million in interim 1988, compared to $14 million in interim 1987. 68/ The industry suffered growing operating losses during the period of investigation, with the largest annual loss occurring in 1987, 69/ and the loss for interim 1988 reaching $1.4 million compared to $546,000 for

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65/ Report at A-31.

66/ Id. at A-33.

67/ Id. at A-42.

68/ Id.

69/ Id.

interim 1987. [70/] Net income demonstrated a similar trend. [71/] Producers of unfilled granular PTFE incurred the bulk of the losses. [72/]

The principal indicators of the industry's performance show that, while apparent consumption of granular PTFE increased dramatically, U.S. producers' performance deteriorated, particularly in 1987. Therefore, Commissioners Eckes, Lodwick, and Rohr find that the domestic industry producing granular PTFE is materially injured. Acting Chairman Brunsdale and Commissioners Liebeler and Cass believe that the description of the domestic industry is accurate and relevant to their decision on the existence of material injury by reason of LTFV imports. [73/]

Cumulation

A cumulative analysis of the volume and price effects of unfairly traded imports is required by statute if imports (1) compete with each other and with the domestic like product, (2) are subject to investigation, and (3) are marketed within a reasonably coincident time period. [74/]

70/ Report at A-42.

71/ Id. at A-43.

72/ Id. at A-35. All producers of unfilled granular PTFE showed operating losses in 1987, while three of the four major producers of filled granular PTFE showed operating income during that year, and the filled sector of the industry overall showed operating income. Compare Report at A-35 with id. at A-39.

73/ However, Commissioner Cass does not believe that it is appropriate in Title VII investigations to ask separately whether the domestic industry is materially injured and then, if material injury is found, to ask whether less than fair value imports are a cause of such material injury. See Additional Views of Commissioner Cass.

74/ 19 U.S.C. § 1677 (7)(C)(iv); H.R. Rep. No. 725, 98th Cong., 2d Sess. 36-37 (1984).

The imports at issue here are all subject to investigation and were all marketed throughout the period of investigation. However, the question of whether the imports compete with each other and with the domestic like product may be somewhat more complicated. In answering the question, the Commission considers a number of factors, including:

> (1) the degree of fungibility between imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;
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> (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product;
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> (3) the existence of common or similar channels of distribution for imports from different countries and the domestic like product; and
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> (4) whether the imports are simultaneously present in the market. 75/

It appears from the record in these investigations that the different grades of unfilled granular PTFE, as well as different types of filled granular PTFE, are not fungible products, and that specific customer requirements are important, particularly with respect to different formulas for filled granular PTFE.

We believe that the statute does not require complete substitutability of imports and the domestic like product in order for us to conclude that they

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75/ Thermostatically Controlled Appliance Plugs and Probe Thermostats Therefor from Canada, Hong Kong, Japan, Malaysia, and Taiwan, Invs. Nos. 701-TA-290-292 and 731-TA-400-404 (Preliminary), USITC Pub. 2087 at 15 & n.38 and cases cited therein (June 1988).

compete with one another for purposes of cumulation. 76/ In these investigations, it appears that there is at least some degree of substitutability at the processor level of various PTFE resins, certainly during the design stage of a given end use product. Moreover, imported and domestic unfilled granular PTFE of the same grade, and specific formulas of filled granular PTFE, appear to be substitutable to some degree. 77/ We believe that this satisfies the competition requirement of the cumulation provision. We therefore based our determination in these investigations on a cumulative analysis of the volume and price effects of Italian and Japanese imports.

76/ We have determined in the past that the statute does not require a complete overlap of geographical marketing areas, or marketing during completely consistent time periods, in order for the Commission to determine that there is sufficient competition for purposes of cumulation. See Fundicao Tupy, S.A. v. United States, 12 CIT ___, 678 F. Supp. 898, 902 (1988), affirming Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan, Invs. Nos. 731-TA-278-281 (Final), USITC Pub. 1845 (May, 1986)(Commission determined sufficient competition for cumulation despite lack of complete overlap in marketing areas and time periods). Similarly, we believe that complete fungibility of products is not necessary in order for us to determine that imports compete with each other and with the domestic like product.

77/ Most U.S. purchasers of PTFE are reported to dual and triple source granular PTFE resin. Tr. at 41, 176; Memorandum EC-L-270, August 5, 1988, at 18. We note, however, that most processors perceive differences in product quality and processability, even within a particular grade or compound of granular PTFE, and that there are certain costs involved in switching suppliers. Processors that make more than one fabricated PTFE product may prefer different suppliers for different applications, which together with long term supply considerations, may account for some of the reported multiple sourcing. Id. at 17-18.

Causation [78] [79]

In making final determinations in antidumping cases, the Commission must determine whether there is material injury "by reason of" the imports subject to investigation. [80] While the Commission may consider information indicating that such injury is caused by factors other than LTFE imports, we may not weigh various possible causes. [81] The statute directs the Commission to consider, among other factors:

> (i) the volume of imports of the merchandise which is the subject of the investigation,
>
> (ii) the effect of imports of that merchandise on prices in the United States for like products, and
>
> (iii) the impact of imports of such merchandise on domestic producers of the like products. [82]

The specific data concerning the volume and value of imports of granular PTFE from Italy and Japan are confidential, as are the specific market penetration ratios. In terms of volume, shipments of imports from Italy and

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78/ See Additional Views of Acting Chairman Brunsdale and Commissioner Liebeler.

79/ Commissioner Cass does not join in this section of the Views of the Commission. In his Additional Views, he explains why he has concluded that the domestic industry has been materially injured by reason of the unfairly traded imports that are the subject of these investigations.

80/ 19 U.S.C. § 1673d(b).

81/ S. Rep. No. 249, 96th Cong., 1st Sess. 74-75 (1979); 19 C.F.R. § 202.27. Moreover, the Court of International Trade has recently affirmed that "[i]f the ITC finds material injury exists due to an even slight contribution from imports, the ITC may not weigh this contribution against the effects of other factors . . ." Hercules, Inc. v. United States, 11 CIT ___, ___, 673 F. Supp. 454, 481 (1987).

82/ 19 U.S.C. § 1677(7)(B)

Japan increased by 34 percent from 1985 to 1987, and accounted for an increasing share of apparent U.S. consumption. 83/ Shipments of imports from Italy and Japan decreased in interim 1988 as compared with interim 1987, by 3.6 percent, with a resulting decline in market share. 84/ This decline is accounted for by the significant drop in shipments of Japanese imports of granular PTFE. 85/ This corroborates narrative information provided to the Commission concerning the withdrawal of Japanese producers from the U.S. market during the first half of 1988, presumably due at least in part to the following factors: institution of these investigations; the Commission's preliminary affirmative determinations in December, 1987; Commerce's preliminary affirmative determination and suspension of liquidation of entries of imports of granular PTFE from Japan (and Italy) in April 1988; and the calculation of a substantial antidumping duty margin on those imports.

The Commission gathered domestic producer and importer pricing information for five common types of granular PTFE, which account for over 80 percent of total domestic shipments and over 80 percent of total import shipments from Italy and Japan. 86/ The Commission received price data from U.S. producers accounting for almost all reported domestic shipments of granular PTFE, from the sole importer of Italian granular PTFE, and from the

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83/ Report at A-61.

84/ Id.

85/ Id.

86/ Id. at A-69, A-70.

two major importers of Japanese granular PTFE. 87/ Domestic producers' prices fluctuated during the period, but overall were lower in 1987 and first quarter 1988 than at the beginning of the period. 88/ Importers' prices for some products declined, while those for other products increased. 89/ Price comparisons for producers' and importers' largest quarterly sales during January 1985 through March 1988 resulted in 78 direct comparisons of weighted average prices. The weighted average prices of imported Italian or Japanese granular PTFE were lower than those of U.S. produced granular PTFE in 60 of the comparisons. 90/

In addition, the Commission gathered price data from processors of granular PTFE, and made comparisons. In contrast to producers' and importers' price comparisons, processors' purchase data did not show a consistent pattern of underselling by the imports compared, with about one-third of the possible comparisons showing underselling by imports, and the remainder showing import prices equal to or above U.S. producers' prices. 91/ Nonetheless, we are persuaded by the information of record that the pricing of LTFV imports has contributed to the generally declining prices received by U.S. producers and to price suppression.

Respondent Daikin argues that because certain of its PTFE products, particularly its M-12 grade, is used in applications for which there is no

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87/ Report at A-69-A-70.

88/ Id. at A-70-A-72, Tables 29-33.

89/ Id. at A-74-A-76, Tables 34-38.

90/ Id. at A-76, A-74-A-76, Tables 34-38.

91/ Id. at A-80-A-84, Table 39.

adequate domestic substitute, its imports cannot be a cause of injury to the domestic industry. 92/ Moreover, to the extent that imports of specific granular PTFE resins are used in particular applications and there is little substitutability, respondents argue that the imports are not a cause of injury to the domestic industry. 93/

Although we recognize that there is some merit to respondents' argument that there is limited substitutability of granular PTFE resin at the processor stage, the pricing information discussed above indicates that, overall, imports have exerted downward pressure on domestic prices for the competing like product. We believe that in the absence of LTFV sales of imports from Italy and Japan, processors would have had an increased incentive to substitute domestic producers' granular PTFE for imports across a range of uses.

Another factor, respondents contend, which contributes to decline in profits is the domestic industry's, and most particularly Du Pont's,

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92/ M-12 imports used in these unique applications accounted for a relatively significant share (by weight) of Japanese imports in 1970. Daikin Post-hearing Brief at 7; Report at A-61. Overall, however, M-12 imports account for a small share of apparent U.S. consumption.

93/ In past investigations the Commission has considered domestic producers' inability to provide products of high quality as a possible alternative cause of injury. E.g. Certain Line Pipes and Tubes from Canada, Inv. No. 731-TA-375 (Preliminary), USITC Pub. 1965 (March 1987)(quality deficiencies formed part of the basis for a negative preliminary determination); Certain Welded Carbon Steel Pipes and Tubes from the People's Republic of China, Inv. No. 731-TA-292 (Final), USITC Pub. 1885 at 11-12 (Aug. 1986) (Commission found that due to the "pervasive defects of the imported Chinese pipe," the subject imports had had no demonstrable effect on the condition of the domestic industry). However, there is no contention in this case, and the record does not suggest, that the domestic industry's product is inferior to the imports subject to investigation as a general matter.

allocation of costs to PTFE production, and its allegedly abnormally high GS&A expenses. The Commission's financial analyst verified Du Pont's financial information, and found no discrepancies. 94/ Du Pont maintains that its cost allocations are long-standing and appropriate. 95/ Du Pont has submitted to the Commission, and to respondents for comment, a description of its cost-allocation methodology. 96/ Our review of the information of record indicates that the domestic industry's cost allocations and GS&A expenses are not a cause of material injury to the domestic industry to the exclusion of the injurious effects of imports. 97/

The information on the record shows that until interim 1988 (after the preliminary Commission determination in these investigations) there was an increasing volume of generally lower-priced LTFV imports from Italy and Japan during the period of investigation and an increasing and significant market share accounted for by those imports. Evidence of price suppression or depression in the U.S. market and the deteriorating performance of the domestic industry lead us to conclude that the LTFV imports are a cause of material injury to the domestic industry producing granular PTFE resin.

94/ Report at A-34, n.1.

95/ Du Pont Post-Hearing Brief at Part 2, Section III-A, pages 1-4.

96/ Du Pont Post-Hearing Brief, following page 3. See Ausimont Post-Hearing Brief at Attachments 6 and 7 for its comments.

97/ In addition we note that the ratio of Du Pont's GS&A expenses as a share of net sales is commensurate with the GS&A expenses to net sales ratio for the overall operations of the establishment in which granular PTFE is produced. Compare Report at A-44 with id. at A-47.

ADDITIONAL VIEWS OF ACTING CHAIRMAN ANNE E. BRUNSDALE AND COMMISSIONER SUSAN LIEBELER

Granular Polytetrafluoroethylene Resin From Italy and Japan
Invs. Nos. 731-TA-385 and 386 (Final)

August 16, 1988

We agree with our colleagues' discussion of like product, domestic industry, and the condition of the domestic industry. We also agree with their determination that domestic producers are materially injured by reason of dumped imports. Because we find that trend analysis does not allow us to separate the effect of dumped imports from the many other factors that affect the domestic industry, we rely on elementary economic analysis to help us resolve the issue of causation.

U.S. shipments of dumped granular PTFE (PTFE) imports from Italy and Japan increased by 34 percent between 1985 and 1987 when measured by quantity and 25 percent when measured by value.1/ Over the same period, the market share of these imports increased from [****] percent to [****] percent of U.S. consumption measured by quantity, and from [****] percent to [****] percent measured by value.2/ These shares indicate a steady and increasing presence for subject imports in the U.S. market.

The dumping margins in this case are relatively high, ranging from 46 percent to 103 percent.3/ In this case, all of the

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1/ Report at A-61 (Table 26).
2/ See Report at A-55 (Table 21).
3/ Final Determination of Sales at Less than Fair Value; Granular Polytetrafluoroethylene Resin from Japan, 53 Fed. Reg. 25,191 (July 5, 1988); Final Determination of Sales at Less than Fair

(continued...)

dumping margins are based on comparisons between the foreign products' prices in their home markets (Italy and Japan) and their prices in the U.S. market.4/

The U.S. Market for PTFE

To understand fully the effects on the domestic industry of unfair imports, it is necessary to understand the market for PTFE. We find it useful to organize our analysis of the market into a consideration of the underlying demand and supply factors that determine the price and quantity outcomes in the market.5/

3/(...continued)
(July 5, 1988); Final Determination of Sales at Less than Fair Value; Granular Polytetrafluoroethylene Resin from Italy, 53 Fed. Reg. 26,096 (July 11, 1988). The weighted average dumping margin as calculated by the economist for Du Pont is 75 percent. Du Pont Posthearing Brief, Attachment 1.

4/ See 53 Fed. Reg. 25,193 (July 5, 1988) (Japan); 53 Fed. Reg. 26,096 (July 11, 1988) (italy).

5/ A more thorough discussion of the use of elasticities is contained in Internal Combustion Forklift Trucks from Japan, Inv. No. 731-TA-377 (Final), USITC pub. 2082, at 66-83 (May 1988) (Additional Views of Vice Chairman Anne E. Brunsdale); see also Color Picture Tubes from Canada, Japan, the Republic of Korea, and Singapore, Inv. Nos. 731-TA-367-370 (Final), USITC Pub. 2046, at 23-32 (December 1987) (Additional Views of Vice Chairman Anne E. Brunsdale); Cold-Rolled Carbon Steel Plates and Sheets from Argentina, Inv. No. 731-TA-175 (Final) (Second Remand), USITC Pub. 2089, at 31-51 (June 1988) (Additional Views of Vice Chairman Anne E. Brunsdale). The Court of International Trade has also discussed with approval the use of elasticities. See Copperweld Corp. v. United States, No. 86-03-00338, slip op. 88-23, at 45-48 (CIT Feb. 24, 1988); USX Corp. v. United States, 12 CIT ___, slip op. 88-30, at 19 (March 15, 1988); Alberta Pork Producers' Marketing Board v. United States, 11 CIT ___, 669 F.Supp. 445, 461-65 (1987).

Overall Demand for PTFE in the United States. The elasticity of domestic demand for the product under investigation is central to our analysis of the impact of unfair imports and the resulting lower prices on domestic producers.

The greater the elasticity of demand, the more consumers will increase their total purchases in response to a given decrease in market prices. Such a response helps to mitigate the adverse effects of the dumped imports on the domestic industry, because additional sales of dumped imports do not come primarily at the expense of domestic producers.

The competition among materials is one key determinant of the sensitivity of PTFE demand to PTFE prices. PTFE is a high performance plastic used in a wide variety of applications. PTFE is significantly more expensive than typical thermoplastics,6/ and is therefore used only in applications requiring one or more of its special properties.7/ These properties are resistance to the action of chemicals, high-temperature stability, superior dielectric properties, and anti-stick performance. The absence of substitutes for PTFE and the fact that the value of PTFE is but a small part of the value of the finished goods that contain PTFE-based components together suggest that end users' demand for PTFE-based components will be unresponsive to PTFE prices.8/

6/ Report at A-6.
7/ See Report at A-2 for discussion.
8/ Granular PTFE is used to manufacture both mechanical parts (bearings, linings, gaskets, and rings) and tapes.

Another avenue through which changing prices can affect demand for PTFE is competition among domestic and foreign PTFE processors. Higher domestic PTFE prices could cause domestic processors to lose contracts for components containing PTFE to foreign processors, leading to a reduction in domestic demand for PTFE. The economic consultant for Ausimont, which opposes the petition, argued that this linkage was significant enough to make the overall domestic demand for PTFE moderately elastic despite the absence of substitutable materials.9/

Initially, the Office of Economics concluded that the overall demand for PTFE was inelastic. Consideration of the argument advanced by Ausimont's economist led the Office of Economics to adopt a revised range of -0.5 to -1.5 for the overall demand elasticity.10/

Based on our own review of the record, we are convinced that the overall demand for PTFE is inelastic. While the argument advanced by Ausimont's economist is theoretically valid, it is not supported by any evidence on the extent of competition between foreign and domestic PTFE processors. In fact, evidence in the record indicates that domestic processors are paying significantly less for PTFE than their foreign competitors and thus are not in danger of losing contracts to their competition based on price. Data in the record indicate that PTFE prices in the U.S. are low

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9/ See Respondent Ausimont's Posthearing Brief, Appendix 12, at 6-10 (July 20, 1988).
10/ See Memorandum from the Director, Office of Economics, EC-L-270, at 31 (August 1988).

compared to outside market prices.11/ Since the cost of raw granular PTFE represents a substantial portion of the total cost of producing PTFE-based components,12/ U.S. processors would appear to be in a favorable cost position relative to their foreign competitors. Therefore, we determine that domestic demand for PTFE is inelastic, fairly close to -0.5.

The Elasticity of Substitution. The degree of substitutability between the varying PTFE formulations sold in the U.S. market is central to the determination regarding causation of material injury by dumped imports. If, as Respondents argue, changes in the relative prices of different PTFE formulations would not lead PTFE processors to switch from one resin to another, the necessary link between dumped imports and material injury cannot be established. Under such circumstances, any material injury that the domestic industry was suffering might be correlated with LTFV imports, but not caused by them. The statutory requirement for a finding of causation and not mere correlation is precisely why we find economic analysis to be helpful in reaching our determination.

The closer the domestic and imported products are substitutes, the greater the impact that dumped imports will have

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11/ The dumping margins in the case suggest that U.S. prices are significantly below those prevailing in Italy and Japan. The unit value of fairly traded imports from Germany is also substantially higher than U.S. prices of domestic PTFE and LTFE imports.
12/ Between 10 percent and 70 percent. See Conference Transcript at 74; see also Prehearing Report at 84.

on domestic producers. In some cases, the ancillary conditions of sale, such as lead time, customer support, financing arrangements, and minimum order quantity can be important determinants of the substitutability between foreign and domestic like products.13/ In this case, all foreign and domestic products are offered on essentially equivalent terms.14/ Therefore, we can focus squarely on the interchangeability of the materials themselves as the fundamental determinant of substitutability.

The evidence on substitutability in this case is mixed. Some products, such as Daikin M-12, have no acceptable substitutes in certain uses, such as the manufacture of thin-skived tape.15/ The [*] percent market share of German PTFE,16/ which is sold at markedly higher prices than domestic PTFE or the imported PTFE from Japan and Italy that is the subject of this investigation, is further evidence that product characteristics other than price are important in this market. At the other end of the spectrum,

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13/ See, e.g., Certain Brass Sheet and Strip from the Netherlands and Japan, Invs. Nos. 731-TA-379 and 380, USITC Pub. ____, at 46-48 (Dissenting Views of Acting Chairman Anne E. Brunsdale and Commissioner Susan Liebeler (July 1988).

14/ Both domestic and foreign PTFE are offered on a delivered price basis (Report at A-65). Delivery lead times are four to six days for both domestic and imported PTFE. Report at A-65. All PTFE producers employ contractual and informal agreements with their major customers having a duration between three months and one year. Id.

15/ This allegation by respondents is largely accepted by the petitioners.

16/ See Report, Appendix D.

Ausimont admits that its domestically produced Halon has quality characteristics that limit its use.17/

Even in applications where PTFE from different suppliers could be used, the need to qualify the PTFE in the specific application is a barrier to immediate substitution.18/ The time necessary for qualification can be lengthy, particularly if the processor of parts made with PTFE requires approval from the user of the PTFE-based components. Also, where the tradename TEFLON is included in a specification, only it may be used. Respondent Daikin suggests that 25 percent of U.S.-market PTFE orders specify the use of TEFLON.19/

The factors indicating limited substitutability must be weighed against those suggesting its possibility. First, multiple sourcing is the rule rather than the exception among PTFE processors. There is some disagreement in the record as to whether multiple sources are used for individual applications.20/ Even multiple sourcing for different applications, which all parties agree is widespread, gives processors an opportunity to shift the weights of different suppliers without incurring the costs of establishing a new business relationship. While the qualification issue considered above may be significant for some products, it will not be for others. For some products, producers

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17/ These quality problems include poor skivability, low dielectrical strength, and non-homogeneous translucency. See Ausimont Prehearing Brief, Attachment 1.
18/ Report at A-12.
19/ See Daikin Posthearing Brief at 8.
20/ Tr. at 161 (DeBusk) Tr. at 176 (Lodwick and DeWal).

have already made multiple qualifications.21/ Even those appearing in opposition to the petition admit that some qualifications can be done "over a weekend".22/

Second, raw PTFE can represent a substantial share of the cost of the PTFE-based components sold by processors to end users such as manufacturers of chemical processing equipment and the automotive and aircraft industries.23/ In applications where customers are sensitive to the cost of PTFE products, competition from suppliers using cheaper PTFE may force processors to be price sensitive. With respect to the TEFLON tradename, commercial specifications are subject to change if market conditions warrant. Respondents present evidence that processors were under extreme pressure from end users of PTFE-based products, particularly the automotive industry, to hold prices down.24/ A large processor interviewed by the staff stated that his company "is generally not willing to pay a premium for any supplier's material because its own customers are very cost conscious."25/ Price-sensitive customers should be amenable to specification changes.

Third, new applications, for which no material has the advantage of having been previously qualified, would appear to be particularly ripe for the use of alternative brands of PTFE. In this regard, we note that apparent U.S. consumption of PTFE

21/ Tr. at 96 (Vic Nunan ICI), Tr. at 17 (Wechsler).
22/ Tr. at 175 (Walsh).
23/ Conference Transcript at 74; Prehearing Report at 84.
24/ See Memorandum EC-L-270, supra note 10, at 18.
25/ Report at A-89. Also, one brief notes that PTFE from five different producers is used "interchangeably" in LNP's filling operation. See ICI Posthearing Brief at 9.

increased by 25 percent between 1985 and 1987 and by 26 percent between the first quarter of 1987 and the first quarter of 1988.26/ These rates, which far exceed the rates of overall economic growth over the comparable periods, would seem to indicate that new applications are important to the PTFE market.

The Office of Economics, after considering the record in the case and Respondents' and Petitioner's comments on its prehearing elasticities memo, places the elasticity of substitution in the range of 1 to 2.27/ Clearly, despite the presence of market segments in which substitution is difficult or impossible, there is a considerable range of uses over which substitution is relatively easy. These include applications in which qualification barriers are low, cost-sensitive applications, and new applications. We therefore conclude that the elasticity of substitution is moderate, falling in the upper end of the range defined in the Office of Economics memo, if not higher.

The Supply Side

The number of domestic and foreign competitors is small, so that we must consider carefully how the firms interact in the market. The evidence in the record strongly indicates that firms selling granular PTFE are price takers rather than price makers.28/

26/ Report at A-9 (Table 1).
27/ See Memorandum EC-L-270, supra note 10, at 17.
28/ Price takers are firms that exercise control over their output level but must transact at market determined prices. For example, the price at which an individual farmer sells grain is totally independent of his decision to sell. Price makers are in control

(continued...)

Given the inelastic nature of total demand for PTFE, industry profits would have undoubtedly increased had higher prices prevailed throughout the period of investigation. Du Pont, by far the largest producer, would be considered as the natural firm to assume price leadership in this situation. In fact, Du Pont could not exercise price leadership, or even make its own attempts to increase prices hold in the PTFE market.29/

Small numbers of firms and competitive behavior are quite compatible given the conditions in this case. As noted above, apparent consumption of PTFE rose at a rapid rate during the period of investigation. Rapid growth generally increases the attractiveness of aggressive pricing behavior as firms seek to capture market share with an eye towards increasing their profitability in a future market that is expected to be much larger than the present one. Ausimont's business strategy, as outlined in its confidential submissions,30/ provides strong evidence of the importance that PTFE suppliers place on establishing a future market position.31/

The technology for producing granular PTFE also favors highly competitive behavior. Variation in PTFE output is achieved by changing throughput rather than stopping and restarting

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28/(...continued)
of their prices. A price maker will choose the price that maximizes its profits, taking account of the relationship between prices and the level of demand.
29/ See Du Pont Prehearing Brief, Appendices D and F.
30/ See Ausimont Prehearing Brief at 6-10.
31/ See Tr. at 105-106.

production.32/ Capital and labor costs are insensitive to the level of output. The same is true of the production process for the monomer (TFE) that is the input to the production process for all types of PTFE. Therefore, average unit cost of PTFE decreases as output increases up to the level of capacity.33/ The significant gap between marginal and average costs in the PTFE production chain makes the operating results of domestic producers more sensitive to their capacity utilization than is typical of industries in which a higher proportion of costs are variable. This in turn leads them to behave in a more competitive way than a mere counting of firms would indicate.

Having determined that the domestic industry is reasonably competitive, we consider the ability of the domestic industry to respond to changes in prices. In looking at the likely change in the domestic industry's supply level as market conditions change, we consider several factors. Among these are the availability of outside markets, possible other uses for existing facilities and equipment, and the ease of entry or exit.

Export shipments of U.S.-produced PTFE fluctuated between [*] and [**] percent of total U.S. shipments in the 1985-1987 period.34/ With exports at the lower end of this range during 1987, diversion of exports does not have significant potential as a source of additional supply to the domestic market. PTFE

32/ Report at A-32 (Table 12).
33/ Du Pont letter to Jonathan Seiger, Investigator, USITC, June 8, 1988.
34/ See Report at A-28 (Table 3).

manufacturing plants cannot be used for other purposes, nor can other plants be converted to make PTFE.35/ PTFE plants regularly operate on a 24-hour basis, and in interim 1988 domestic PTFE plants operated near or at maximum throughput.36/

The monomer TFE, the primary input to PTFE production, is highly explosive and difficult to handle. The difficulty of handling TFE presents a major barrier to entry by inexperienced producers. TFE, and therefore PTFE, is not produced in any less developed or newly industrialized countries.37/ Although new entrants, either domestic or foreign, may be blocked from entry by lack of experience with TFE, the presence of ample TFE capacity makes expansion of PTFE capacity economically attractive to current producers.38/ It also increases the speed with which new capacity can be brought on line. Du Pont's excess TFE capacity and Ausimont's new plant plans together indicate that, despite tight capacity in interim 1988, supply can respond to higher prices.39/ The Office of Economics Memorandum places supply elasticity in the range of 3 to 5.40/ After considering the views of both the Petitioner and Respondents, we are convinced that the true elasticity lies within this "moderate" range.

35/ See Memorandum EC-L-270, supra note 10, at 6.
36/ Id.
37/ See id. at 7.
38/ See id. at 10.
39/ See Report at A-19, n. 2 (Du Pont); Tr. at 105-106 (Ausimont).
40/ See Memorandum EC-L-270, supra note 10, at 10-11.

Supply Conditions for Fairly Traded Imports. In addition to imports from Italy and Japan there are also fairly traded imports of PTFE from Germany.41/ These imports are presently sold at a unit value considerably above the unit value of most domestic PTFE and of the imports from Italy and Japan.42/ There is no evidence suggesting any supply limitations on these imports.

Material Injury Caused by Dumped Imports in This Case

This case involves a market where domestic supply is moderately elastic. Overall demand for granular PTFE is inelastic. The domestic products and the dumped foreign products are moderately substitutable across a significant range of uses, and the dumped imports hold about a fifth of the U.S. market. The dumping margins computed by the Department of Commerce are high, ranging from 46 percent to 103 percent. Even allowing for the possibility that foreign producers precluded from dumping would respond by lowering their prices in the home market as well as by raising their U.S. market prices, there is no doubt that the prices of dumped PTFE would be considerably above their present levels.

Under these conditions, dumped imports should have a significant impact on both the quantity produced by the domestic industry and domestic prices. While the exact balance of quantity and price effects will be sensitive to current industry conditions, most notably the level of domestic capacity

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41/ See Report at B-20.
42/ See Report at A-79 (Table 22).

utilization, these effects together will translate into a material impact on the domestic industry.

If Italian and Japanese PTFE had been fairly traded, the resulting higher prices for these products would have led U.S. processors to switch towards other suppliers in applications where substitution was relatively easy. Domestic producers would be the prime beneficiaries of these efforts at substitution, since fairly traded imports play an insignificant role in this market. Furthermore, the production process involves many costs that are largely fixed, so that any increase in domestic capacity utilization would have a significant impact on the bottom line.

Even if high capacity utilization limited domestic producers' ability to increase output in response to the market opportunities created, were the Japanese and Italians were forced to trade fairly, domestic producers would be able to increase prices significantly. If the Japanesse and Italians were trading fairly, their prices would have been substantially higher, and U.S. producers would have been able to charge a great deal more for domestically produced PTFE. While the exact mix of increased quantity and higher prices that would result from ending unfair imports will necessarily be sensitive to prevailing market conditions, the revenue effect that depends on the sum of these two effects will be material under any conceivable market scenario.

The record in this case includes some novel, but misdirected, arguments against the petition. Ausimont argues that its trend of

increasing imports and reduced domestic output reflects a deliberate business strategy of shifting customers away from Halon, its current domestically produced product, to Algoflon. The latter product is now produced only in Italy, but Ausimont intends to start producing it in its new U.S. facility.43/ In effect, Ausimont explains its dumping as a tool to improve the competitive position of its new facility by getting a head start on the qualification process.44/ Such a motivation cannot, under the controlling statutes, serve as an excuse for dumping.

The apparent tightening of supply conditions in the market since the beginning of 1988 prompted some processors of granular PTFE to contact the Commission with their concerns over higher prices and product availability. To the extent that current information is available, the Commission should of course consider it in determining whether the domestic industry producing the like product is materially injured by unfair imports. However, the antidumping statute precludes the Commission from considering the impact of antidumping duties on consumers of unfairly traded imports and the domestic like product in its injury determination.

In sum, the evidence presented to the Commission shows a significant volume of unfair imports, a high dumping margin, and enough substitutability between domestic granular PTFE and the unfair imports from Italy and Japan so that the revenue loss to the domestic industry by reason of the unfair imports rises to the

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43/ See Tr. at 105-106.
44/ Id.

level of material injury. We therefore agree with our colleagues that the statutory criteria are met and that antidumping duties should be imposed.

ADDITIONAL VIEWS OF COMMISSIONER RONALD A. CASS

Granular Polytetrafluoroethylene Resin
from Italy and Japan
Investigations Nos. 731-TA-385 and 386
(Final)

I concur with the Commission's affirmative determination in these investigations because I believe that the domestic industry has been materially injured by less than fair value ("LTFV") imports of granular polytetrafluoroethylene resin ("granular PTFE"). I have, however, reached this conclusion for reasons that are different in several respects from those that form the bases for the decisions of certain of my colleagues. Accordingly, I offer these Additional Views in order to explain why an affirmative determination in these investigations is appropriate in my opinion.

I. General Issues Relating to the Merits of the Comparative Approach

In other opinions, I have described in detail the rationale underlying the "comparative approach" that I use in analyzing Title VII cases.1/ No purpose would be served by repeating that exposition here. However, before applying that approach to the facts of the current investigation, it might be

1/ Internal Combustion Engine Forklift Trucks from Japan, Inv. No. 731-TA-377 (Final), USITC Pub. 2082 (May 1988) (Additional Views of Commissioner Cass) ("Forklift Trucks"); 3.5" Microdisks and Media Therefor from Japan, Inv. No. 731-TA-389 (Preliminary), USITC Pub. 2076 (April 1988) ("Microdisks").

helpful to discuss briefly certain particular aspects of the comparative approach that were the subject of the arguments of the parties to this investigation, or of recent commentaries by others.

This discussion is, I believe, very useful. As I have indicated on previous occasions,2/ I recognize that the comparative approach that I have been using does not necessarily represent the only reasonable interpretation of Title VII of the Tariff Act of 1930. I am grateful for comments that might help refine or improve that approach or that suggest other ways of looking at Title VII cases that might help the Commission more effectively to carry out its statutory mandate.

A. Judicial Review and Costs

It has been suggested that there are a variety of reasons why the comparative approach may not withstand judicial review.3/ In particular, it has been said that the comparative

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2/ Forklift Trucks, supra, at 112.

3/ See Sewn Cloth Headware from the People's Republic of China, Inv. No. 731-TA-405 (Preliminary), USITC Pub. 2096 (July 1988) (Additional Views of Commissioner Eckes) ("Sewn Cloth Headware"). In this context, the point has been made that the so-called traditional approach has "withstood repeated judicial scrutiny". Id. at 17. There is no dispute about the fact that an approach that implicitly compares import trends with trends in the performance of the relevant domestic industry has been approved against various judicial challenges, but there may be room for disagreement over the significance of this fact. First, as explained infra, it is not at all clear that the trend-comparison approach represents the Commission's "traditional approach". Second, the trend-comparison approach is not the only approach to Title VII cases to secure judicial

(continued...)

approach will not survive such review because it: (1) assumes that dumping or subsidization took place throughout the three-year period of the Commission's investigation; (2) is based upon an inappropriate supposition that dumping margins or subsidy rates can be used to estimate what the price of imports would have been if no dumping or subsidization had taken place; and (3) may not comply with the Antidumping and Subsidies Codes of the General Agreement on Trade and Tariffs (the "GATT").4/ It has also been suggested that the costs of the approach to the Commission and participants in Commission proceedings may be unduly high.5/ For the reasons set forth below, there is no basis for any of these concerns.

1. Assumptions Concerning Duration Of Unfair Trade Practices

3/(...continued)
approval. Third, and related, judicial approval does not confer an exclusive license upon its adherents. The Commission has a great deal of discretion in formulating the methods that it uses to analyze Title VII cases. See, e.g., S. Rep. No. 249, 96th Cong., 1st Sess. 88 (1979); Hyundai Pipe Co., Ltd. v. United States Int'l Trade Commission, 11 C.I.T. __, 670 F. Supp. 357, 360 (Ct. Int'l Trade 1987). The fact that one particular method of analysis has been found to lie properly within that discretion does not, of course, mean that the method does not have deficiencies, or drawbacks relative to alternative methods. In short, there is no doubt that the comparative approach "must stand or fall on its own merits" (see Sewn Cloth Headware, supra, at 18), but this does not mean that the advocates of this approach are required to refrain from weighing its advantages and disadvantages against those of the so-called traditional approach.

4/ Sewn Cloth Headware, supra, at 18-19.

5/ Id. at 19.

The comparative approach has been said to assume that "dumping or subsidization was constant throughout the three-year period of the Commission's investigation".6/ It has been suggested that this is a groundless assumption that causes the "whole approach [to] topple . . . like a house of cards".7/

This is a misconception of the comparative approach. The comparative approach does not assume that dumping or subsidization occurred during any portion of the Commission's investigation other than the period that most closely coincides with the period that the Department of Commerce examines in order to determine whether less than fair value ("LTFV") or subsidized sales took place. In applying the comparative approach, I assess whether or not material injury has occurred by comparing the conditions that obtained in the domestic industry during that period with the conditions that would have obtained at that time if no LTFV or subsidized sales had taken place. I do not assume that dumping or subsidization took place at any earlier time.8/

I have, however, contributed to the apparent confusion on this point by explicitly raising the issue of the relationship between information about the unfair trade practice and

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6/ Id. at 19.

7/ Id. at 20.

8/ See, e.g., Light-Walled Rectangular Pipes and Tubes from Argentina and Taiwan, Inv. No. 731-TA-409-410 (Preliminary), USITC Pub. 2098 (July 1988) (Additional Views of Commissioner Cass) at 18.

information about the condition of the domestic industry. In 3.5" Microdisks from Japan,9/ I noted that to assess the effects of dumping, ideally one should know when it began.10/ I also noted that this information is not available to the Commission; we do not know whether dumping (or subsidization) did or did not occur at any time other than the period investigated by the Department of Commerce, which in antidumping cases generally covers the six months immediately prior to filing of the petition.11/ This appeared to me to present a problem given the approach frequently taken by the Commission in Title VII cases, in which I believe Commissioners sometimes infer the effects of dumped or subsidized imports from changes in the performance of the domestic industry over a longer period of time (usually three years) than is examined by Commerce. Hence, in Forklift Trucks,12/ I observed that

> [I]f one is going to draw any inference regarding the effect of LTFV imports on the industry from industry performance at any point in our three-year period of investigation other than the six-month period examined by Commerce, one simply must make some judgment about whether in fact the industry faced LTFV imports at that point. This judgment could be based on an inference from facts in the record, on a rebuttable presumption, or an unexamined assumption.13/

9/ Inv. No. 731-TA-389 (Preliminary), USITC Pub. 2076 (April 1988) (Additional Views of Commissioner Cass).

10/ Id. at 76.

11/ Sewn Cloth Headware, supra, at 20, n.6.

12/ Inv. No. 731-TA-377 (Final), USITC Pub 2082 (May 1988) (Additional Views of Commissioner Cass).

13/ Forklift Trucks, supra, at 121-22.

These comments were not a description of my approach to Title VII cases; they were instead an attempt to summarize my understanding of the approach that has been used by other Commissioners, who I believe often reach results consistent with an assumption that dumping has occurred over the entire period of the investigation, but do not articulate and examine that assumption.14/

In this regard, the difference between the trend-comparison approach and the comparative analysis is illustrated by our decision in Nitrile Rubber from Japan.15/ In that case, the domestic industry's performance improved substantially over the three-year period normally examined by the Commission, including the period during which Commerce found dumping. The petitioner requested, however, that the Commission assess injury based on a comparison of subsequent industry performance with its performance four and a half years earlier. Petitioner admitted that the industry had enjoyed an uncommonly good year at that time, but urged that its performance every year since was tainted by the effects of dumping. Judged from the vantage suggested by petitioner, but not from either an earlier or a subsequent year, the domestic industry performance had fallen off rather than improved. The Commission reached an

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14/ In a statement directly linked to the statement quoted above, I distinguished the comparative approach from approaches that attempt to draw inferences regarding the effect of LTFV imports simply from trends in industry performance. Forklift Trucks, supra, at 122, n. 21.

15/ Inv. No. 731-TA-384 (Final), USITC Pub. 2090 (June 1988).

affirmative determination, with three commissioners assessing trends as requested by the petitioner without explanation of the choice of that four and a half year span and without acknowledging the respondent's arguments in opposition to that method of analysis. I also reached an affirmative determination in that investigation, but did so on the basis of an explicit analysis of the impact the dumped imports had on the domestic industry, focusing attention on information covering the period in which Commerce found dumping had occurred. I believe that my disposition of this investigation was more consistent with the statute governing these proceedings than the approach taken by the majority of my colleagues.

I do not mean to suggest that it is legally impermissible for my colleagues to assume, as Petitioner in Nitrile Rubber asserted, that dumping did occur over the entire course of an investigation. I do, however, believe it is preferable to allow determinations of the existence and magnitude of dumping or subsidy practices to be made by the Department of Commerce. This appears to be the statutory design. If that determination is left to Commerce, then three alternatives present themselves.

First, one can examine only the six-month period investigated by Commerce and attempt to assess injury within that period. Yet, if that is to be done on the basis of an evaluation of trends, the trends will be almost devoid of meaning. The period compared -- for instance, the six months

before Commerce's investigation and the six months investigated by Commerce -- will be so short that they will not plainly demonstrate the effects of the unfair trade practice. Too many other factors can have affected the domestic industry's performance during that period. Moreover, looking for adverse trends contiguous with Commerce's finding of dumping or subsidization necessarily makes an assumption that dumping or subsidization did not take place during the earlier period. This is different in effect but not in its essential nature from the assumption now adopted frequently by Commissioners. We do not know that dumping did not take place earlier any more than we know that it did. As I observed in Forklift Trucks,16/ trend-based analysis of injury from unfair trade practices must make some assumption about when that practice began.

Second, we could adopt a comparative approach to analysis of injury, such I have used. As previously noted, in applying the comparative approach, I do not, and need not, assume that dumping or subsidization occurred during any period other than the one that coincides with the Commerce's investigation. The essence of the comparative approach is to compare the condition of the domestic industry during the period when we know that dumping occurred with the condition that would have prevailed during that period absent dumping. Consequently, no assumption or inference respecting dumping during other periods is required.

16/ Forklift Trucks, supra, at 121-22.

Third, one could refuse to analyze the effects of the unfair trade practice altogether. This, apparently, is the approach preferred by one of my colleagues, who has advanced an interpretation of the law that would obviate the need for adherents to trend analysis to make an assumption about the existence or non-existence of dumping during the period of our investigation that is not congruent with the period examined by the Department of Commerce. Under this interpretation, the Commission does not seek to determine whether sales of subject imports at LTFV have injured the domestic industry, whether through a direct comparative approach or through the comparison of trends in the domestic industry's performance with trends in the assertedly LTFV imports' sales and prices over the entire period of our investigation. In short, the Commission instead asks whether the domestic industry is performing less well now than three or so years earlier and whether imports of the same basic type and source as Commerce found to be dumped during the period of its investigation might have contributed to the change in the domestic industry's performance over the longer period of our investigation.

This approach not only eliminates the need to make any assumptions respecting the duration of dumping. It also dispenses altogether with any attempt to assess the effects of the unfair trade practice(s) in question.17/

17/ Sewn Cloth Headware, supra, at 23, n. 10; 26.

The basis for this approach apparently is the fact that the statute directs us only to examine the impact of imports of the class or kind of merchandise that is under investigation by Commerce. It is conceivable that the statutory language -- standing alone, and without reference to its purpose or legislative history -- might be read to imply no concern with any conclusion that the goods examined in our investigation were in fact sold at LTFV. For the reasons explained below, this is, however, a very weak argument.

First, as has been acknowledged by the proponent of this argument,18/ the antidumping laws under which we conduct our investigations are intended to implement and be consistent with the GATT antidumping code.19/ Of course, in any instance where GATT and Title VII of the Tariff Act diverge, it is the U.S. law which controls our decisions. In general, however, the GATT and Title VII should be construed as being consistent in the absence of clear evidence to the contrary. The parties to GATT have undertaken to impose antidumping duties only when it is demonstrated that "dumped imports are, through the effects of dumping, causing injury".20/ Other nations implementing this provision have had no doubt that it requires an analysis

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18/ See, e.g., id. at 36, n. 29.

19/ S. Rep. No. 249, 96th Cong., 1st Sess. 87 (1979); Algoma Steel Corp. v. United States, supra, at 13, n. 6.

20/ Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade ("GATT Implementation Agreement"), Art. 3, Sec. 4 (emphasis added).

of the effects of dumping and not of imports whether or not dumped.21/ Certainly, the Congress never suggested that it viewed Title VII as basically incompatible with this understanding. To the contrary, the legislative history of Title VII plainly indicates that fairly traded imports are to be treated as an "other factor", and the effect of these imports on the domestic industry is not to be compared to the effect of LTFV imports, let alone to supplant LTFV imports as the focus of the Commission's investigation. The Senate Finance Committee' Report expressed Congress' intent as follows:

> Section 735(b) contains the same causation terms as in current law, i.e., an industry must be materially injured 'by reason of' less-than-fair-value imports . . . . Current law does not, nor will Section 735, contemplate that the effects from less-than-fair-value the [sic] imports be weighed against the effects associated with other factors (e.g., the volume and prices of imports sold at fair value, contraction in demand or changes in patterns of consumption . . . .).22/

21/ See, e.g., Special Import Measures Act, Can. Stat. ch. 25, §42(1) (1984); On Protection Against Dumped or Subsidized Imports from Countries Not Members of the European Economic Community, Council Reg. (EEC) No. 2176/84. See also Subsidized Grain Corn Originating in or Exported from the United States of America, Inquiry No. CIT-7-86 (Canadian Import Tribunal 1987); Colour Television Receiving Sets Originating In or Exported from Korea, Inquiry No. CIT-13-85 (Canadian Import Tribunal 1986); Certain Rail-Car Axles Originating in or Exported from Japan and the United States of America and Certain Rail-Car and Locomotive Axles Originating in or Exported from the U.K., Inquiry No. CIT-5-85 (Canadian Import Tribunal 1985).

22/ S. Rep. No. 249, 9th Cong., 1st Sess. 74 (1979) (emphasis added).

The Report of the House Ways and Means Committee contained the following comparable language:

> The bill contains the same causation element as present law, i.e., material injury must be 'by reason of' the subsidized or less than fair value imports. In determining whether such injury is 'by reason of' such imports, the ITC looks at the effects of such imports on the domestic industry. The law does not, however, contemplate that injury from such imports be weighed against other factors (e.g., the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand, or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology, and the export performance and productivity of the domestic industry) which may be contributing to overall injury to an industry.23/

The inescapable inference is that Congress did not intend that the Commission seek to determine the effects of imports that were not dumped.24/ In light of this legislative history, the fact that Congress did not include the phrase "through the effects of dumping" in the statute, when instructing the Commission to examine the effects of LTFV imports, plainly can not be construed as evidence that Congress intended anything substantively different from GATT. Accordingly, there is no

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23/ H. Rep. No. 317, 96th Cong., 1st Sess. 47 (1979) (emphasis added).

24/ See, e.g., S. Rep. No. 249, 96th Cong., 1st Sess. 74-75 (1979); H.R. Rep. No. 317, 96th Cong., 1st Sess. 46-47 (1979). See also S. Rep. No. 1298, 93rd Cong., 2d Sess. 179 (1974) (discussion of purpose of Antidumping Act of 1921).

apparent basis for the claim that the antidumping laws do not require the Commission to assess the effects of dumping.25/

The argument for reading consideration of dumping out of the United States antidumping law might seem to be bolstered by Title VII's directive to examine the effects of the class of merchandise the Department of Commerce has found to be dumped rather than a directive to examine the effects of "dumped imports." A reading of the statute that saw these terms as defining very different concepts, however, would be incorrect. In choosing the particular language of Title VII, Congress manifestly intended to avoid a conflict between proceedings of two federal agencies and not to create a conflict between U.S. law and the GATT. Title VII, which divides authority over antidumping investigations between Commerce and the Commission, sensibly directs that both proceedings concern the same products. Rather than direct each agency to make determinations respecting "dumped imports," which leaves jurisdiction over definition of that term unclear, the statute instructs Commerce to ascertain whether a class of merchandise is being dumped and refers the Commission back to that definition. Thus, Title VII directs the Commission to determine preliminarily if there is a reasonable indication

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25/ There is likewise no apparent basis for the claim that the U.S. law pertaining to foreign subsidies does not require the Commission to determine the effects of the subsidies themselves, as opposed to imports whether or not subsidized. See, e.g., S. Rep. No. 249, 96th Cong., 1st Sess. 57-58 (1979); H.R. Rep. No. 317, 96th Cong., 1st Sess. 55 (1979) and legislative history quoted, supra.

that the merchandise subject to investigation by Commerce has materially injured a domestic industry; then, in final investigations, Title VII instructs the Commission to determine if an industry has been materially injured by reason of the merchandise Commerce has by that time actually determined to be dumped.

Hence, this statutory formulation is a quite sensible substitute for use of the term "dumped imports" in the context of a bifurcated process. The choice of words is not intended to direct the Commission to investigate something other than the effects of dumping, which can only affect the domestic industry through dumped imports. The statute refers us to a definition of a class of products that has been dumped. As a rule, the magnitude of the dumping (as measured by the dumping margin) is not important to the domestic industry unless dumped products are imported in sufficient volume and compete sufficiently closely with the domestic product to affect domestic prices, sales, profits, employment, and so on. The initial focus of any analysis of injury from dumping, therefore, must be on the class of dumped imports. Commerce excludes from its order the products of any company found not to be dumping, and the Commission cannot bring these goods within the scope of its own investigation. Thus, it should be plain that Title VII does not constitute a charter to investigate the effects of a general class of imports without regard to dumping.

The decision of the Court of International Trade in Algoma Steel Corp. v. United States 26/ does not offer any support for a contrary conclusion. That case involved a challenge to the Commission's evaluation of the effect on the domestic industry of the entire class of merchandise found by Commerce to have been dumped. Although Commerce excludes from that class the products of companies found not to have been dumping, it does not exclude particular, individual items found not to have been sold at LTFV by a company that sold similar items at LTFV during the period investigated. The Court held that the Commission did not err by deciding also not to exclude these imports from its consideration.27/

It was in that context that the Court observed that "Congress has not simply directed ITC to determine directly if dumping itself is causing injury . . . Congress opted to direct ITC to determine if imports of a specific class of merchandise, determined by ITA to have been sold at LTFV, are causing injury".28/ The Court, in other words, said that the Commission need not determine the effects of dumping "directly", as by looking at the effects of each sale of a possibly dumped import and the contribution dumping made to

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26/ __ C.I.T. __, slip op. 88-74 (June 8, 1988).

27/ In that vein, it should be noted that, since the comparative approach, as currently applied, uses the dumping margins calculated by the Commerce, it does not exclude these imports from its consideration either.

28/ Algoma Steel Corp. v. United States, supra, at 13 (emphasis added).

such effects. The Court did not say that the Commission is not required -- much less that it is not permitted -- to make any determination on the effects of dumping. Indeed, the use of the word "directly" suggests precisely the opposite conclusion, that the Commission is permitted to assess the effects of dumping indirectly by looking at the average margins for the dumped class, at the volume of the class of merchandise imported, and so on. The reasoning behind the Court's decision supports this reading. The Court noted that one of the reasons the Commission need not eliminate fairly traded imports from its analysis is because the weighted average dumping margins calculated by Congress already take the absence of dumping for these imports into account. Accordingly, the Court stated that "to eliminate sales that are at fair value and then . . . apply margins analysis would be a form of double counting."29/ This statement would not be of any possible relevance to the case, if, in the Court's view, the Commission task is to evaluate something other than the effects of dumping.

Finally, when Congress amended Title VII in 1979 and crafted the particular language that, with minor amendments, governs our determinations today, Congress indicated its intent not to make any major change in the way the Commission interpreted the antidumping law.30/ The Commission's approach to antidumping investigations immediately prior to 1979, while

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29/ Id. at 13, n. 7.

30/ S. Rep. No. 249, 96th Cong., 1st Sess. 57, 74 (1979).

not absolutely uniform, plainly sought to address the effects of dumping, not the effects of imports dumping aside. To that end, the Commission explicitly asked what injury was caused by dumping, as reflected in the margins set by Commerce, and what injury instead was caused by other attributes of the imports.31/ Any abandonment of concern with the effects of dumping32/ would represent a departure from the types of Commission practice approved by Congress and by the courts. Although the courts have allowed the Commission to depart from explicit reliance on dumping margins,33/ judicial authority does not suggest that we are free to abandon examination of the effects of dumping altogether.

2. Reliance On Dumping And Subsidy Margins

A number of comments have been made concerning the fact that the comparative approach uses, as part of the information relevant to assessing Title VII cases, the dumping margins calculated by the Department of Commerce. As a threshold matter, it should be noted that I have said on other occasions that the comparative approach uses these margins as the "best information . . . available",34/ in accordance with the

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31/ See, e.g., Metal-Walled Above-Ground Swimming Pools from Japan, Inv. AA 1921-165, USITC Pub. 821 (June 1977); Welded Stainless Steel Pipe and Tube from Japan, Inv. No. AA 1921-180, USITC Pub. 899 (July 1978).

32/ Sewn Cloth Headware, supra, at 26.

33/ See Hyundai Pipe Co., Ltd. v. United States Int'l Trade Commission, supra.

34/ 19 U.S.C. Section 1677e(b).

statutory command generally applicable to Commission investigations, with the knowledge that the margins do not represent the differences in the actual sales prices being compared.35/ Accordingly, a number of comments that have been made concerning certain perceived or potential technical deficiencies in the way that the margin data are constructed by the Commerce Department36/ do not warrant additional discussion here.37/

Other comments that have been made regarding the way in which the comparative approach uses margin data indicate that certain aspects of the approach may not yet be well understood. For example, it has been said that the approach's use of margins is flawed because

> [T]he Commission has no way of knowing how a foreign producer or exporter would have conducted its business differently so as to eliminate dumping margins in anticipation of a dumping case. Theoretically such a company could have raised its import price, lowered its home market price or some combination of the two.38/

Of course, one can never know with certainty why a particular event occurred or in what way other events would have differed in the absence of a specific casual predicate. But one can

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35/ Forklift Trucks, supra, at 128.

36/ Sewn Cloth Headware, supra, at 31-32.

37/ This is not to say, however, that the comments in question are not germane. To the contrary, they suggest that the Commission should perhaps consider whether it would be possible to obtain data that more precisely reflect actual sales prices.37/

38/ Sewn Cloth Headware, supra, at 28.

make reasonable judgments about such matters, and this is done by adherents to other approaches in innumerable circumstances. The comparative approach specifically takes into account the possibility that the price of the LTFV product could vary in any number of different ways if dumping had not occurred, and attempts to determine, with as much precision as is reasonable, what that price would have been.39/

For purposes of clarification, it should also be noted that the approach does not, as has been suggested, attempt to determine the price that would have been charged "to eliminate margins in anticipation of a dumping case"40/ or "to determine the remedial effect of the removal of the dumping margin".41/ These erroneous notions appear to lie at the heart of a significant proportion of the commentary objecting to the use of margins as part of the comparative approach.42/ In reality, the comparative approach is retrospective, not prospective: it attempts to determine what prices would have been charged if exporters were unable to charge different prices in the United States market and their home market. The approach does not attempt to determine what exporters might do, or might have

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39/ Microdisks, supra, at 74-79.

40/ Sewn Cloth Headware, supra, at 28.

41/ Certain Brass Sheet and Strip from Japan and the Netherlands, Inv. No. 731-TA-379 and 380 (Final), USITC Pub. 2099 (July 1988) (Additional Views of Commissioner Eckes) ("Brass Sheet and Strip") at 24.

42/ See Sewn Cloth Headware, supra, at 29-32.

done, in order to anticipate and defeat possible legal arguments that might be made against them in an antidumping proceeding, nor does it concern itself in any way with the effect of possible remedial measures.43/

It has also been asserted that the use of margins by the comparative approach is flawed because it uses in its analysis a single averaged dumping margin of all exporters/producers from all countries under investigation.44/ The implication appears to be that this approach is defective because it is not based upon "the pricing behavior of any actual foreign producer or exporter".45/ In reality, the comparative approach, as I have applied it, does not "average" the dumping margins calculated for exporters/producers in different countries. The effect of dumping on import prices and volumes is assessed separately for each country under investigation and these effects are then cumulated as necessary. As for the claim that the approach is flawed because, in many circumstances, it does not use the dumping margins applicable to particular producers,

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43/ This is true regardless of any oral "statement" purportedly made by a Commission staff member that supposedly might suggest otherwise. See Brass Sheet and Strip, supra, at 24, n. 4. It is, of course, difficult to comment in the abstract on the statement in question, given the fact that no text of the statement itself has been offered. In any event, it should be obvious that Commission staff members do not ordinarily speak for the Commission, or for individual Commissioners, and that any statements by staff members that purport to describe the analytical approaches of individual Commissioners are not entitled to any weight.

44/ Sewn Cloth Headware, supra, at 33.

45/ Id.

the short answer is that the use of weighted average dumping margins yields the same conclusions as those that would be generated by the posited alternative.

Finally, it should be noted that there is no real question that the law permits the Commission to use dumping margins in its injury determinations. As noted above, the Commission has done so in numerous cases, stretching back many years, and the courts have consistently upheld this practice.46/ There is nothing about the way in which the comparative approach uses margins that would place it outside the ambit of these decisions.

C. Question of International Obligations

With respect to the claim that the comparative approach may not satisfy the requirements of GATT, it appears that the only basis for this assertion is the belief that the comparative approach is "hypothetical" and not based on "positive evidence" and "facts on the record".47/ In earlier opinions, I have already explained why the comparative question is a factual one, depending upon readily observable facts as well as inferences drawn from those facts.48/ Any objective reading of its application to actual investigations will confirm its concern with the factual record before the

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46/ See, e.g., Hyundai Pipe Co., Ltd. v. United States Int'l Trade Commission, supra; Copperweld Corp. v. United States, __ C.I.T. __, slip. op. 88-23 (February 24, 1988).

47/ Sewn Cloth Headware, supra, at 34-35.

48/ See Forklift Trucks, supra, at 116.

Commission.49/ This concern certainly is no less than that of other past and present members of the Commission. There is therefore no reason to believe that the comparative approach is peculiarly vulnerable to attack on the grounds suggested. Moreover, as explained above, the comparative approach takes a view of U.S. antidumping and subsidy law that is clearly GATT-consistent, in sharp contrast to an approach put forward as a principal alternative.

D. Cost To The Commission And Parties Of The Comparative Approach

There is likewise no reason to believe that analysis of Title VII cases through the comparative approach is any more costly to the Commission or private parties than other alternative approaches. Like the other members of the Commission, I am not in a position to offer any concrete evidence on this issue, but I suspect that precisely the opposite is true. Of course, the principal determinant of the cost of any investigation to the parties is likely to be the expected value of the investigation's outcome to those parties. At least two facts, however, indicate that the comparative approach may be less costly to parties than alternative approaches to our investigations.

49/ Any such reading will also confirm, if confirmation is needed, that there is no basis for the suggestion, made by some, that the comparative approach leaves no room for human judgment because it considers, among other information, price elasticities and the results of an analysis performed under the CADIC model developed by the Office of Economics. See Brass Sheet and Strip, supra, at 26-27.

First, the comparative approach is relatively explicit in its use of information, thus facilitating parties' presentation of cases under this approach. In addition, the Commission staff has performed various analyses of the information collected by staff and submitted by parties that should be especially helpful to parties in connection with the comparative approach. This, too, however has been criticized, for reasons not easily comprehended. In particular, the claim has been made that a "substantial amount of staff time has been devoted to formulating the new approach".50/ Various internal memoranda from the Commission's Office of Economics are cited as evidence for this proposition.51/ In fact, all of these memoranda post-dated the opinion in which the comparative approach was first described in detail.52/ Even putting this fact to one side, it is difficult to understand the criticism that is being levelled. Ordinarily, one would not think that the fact that time, energy and thought have gone into the development of an approach would be viewed as a legitimate basis upon which to criticize that approach.

It also has been claimed that the use of the comparative approach is uniquely costly to the Commission.53/ It does not, however, appear that any effort has been made to compare the

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50/ Sewn Cloth Headware, supra, at 17.

51/ Id.

52/ See Microdisks, supra.

53/ Sewn Cloth Headware, supra, at 36-37.

cost of this approach with that of other approaches. All that has been done is to assert that significant staff time may have been required to develop information needed for the use of the comparative approach in one recent investigation.

It may in fact be the case that the staff is spending a significant amount of time in connection with the comparative approach, but that is hardly surprising. The comparative approach, since it is a new approach, may require a slightly higher initial expenditure of time by the staff until the staff has familiarized itself with the approach, a process that should soon be completed, if indeed it has not been completed already. Additionally, the time spent by Commission staff on matters useful to the comparative approach is not an investment this approach alone demands. For example, the modest information about other markets relied on by the comparative approach is critical to disposition of claims of threatened injury.54/

Yet another criticism suggests implicitly that the claimed investment of staff time has increased, not decreased, the investment of private parties. In this regard, it has been asserted that certain parties are "increasingly employing both a law firm and an economist to represent them before the Commission".55/ That development does not mean that parties

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54/ See Certain Electrical Conductor Aluminum Redraw Rod from Venezuela (Final), Inv. Nos. 701-TA-287 and 731-TA-379 (August 1988).

55/ Sewn Cloth Headware, supra, at 36-37.

necessarily spend more money in total; there is no reason to believe that every dollar spent for an economic consultant is a dollar that would otherwise not have been spent on the investigation.

Moreover, the use of economic consultants in our proceedings is hardly noteworthy. For one thing, the participation of economists in Title VII cases before the Commission is not a new development. The Commission has long assigned an economist from the Office of Economics to each Title VII case to provide advice and other assistance to the Commission concerning the economic issues that invariably arise in such cases. And private parties have been hiring economists long before the comparative approach was applied to Title VII investigations. To state the obvious, the Commission's mandate is to examine economic effects, and there is no discipline more relevant than economics to examination of the effect of LTFV imports on domestic industry. Economists naturally can be expected to have a visible role in presenting cases before the Commission. The increasing sophistication of economists' technical tools may have contributed to their increased presence before the Commission. In any event, there is no obvious basis, logical or otherwise, for the claim that the use of economic consultants in Commission investigations demonstrates that our investigations have become more costly to parties.

II. Granular PTFE: Material Injury by Reason of LTFV Imports

In this case, as in other Title VII investigations, I have evaluated whether the domestic industry has suffered material injury by carrying out the three-part inquiry that I believe is suggested by the statute that governs these investigations. As I have explained in other opinions,56/ this inquiry compares the condition of the domestic industry to the condition that would have existed if there had been no LTFV imports. The first part of the inquiry assesses the way in which the prices and volumes of the subject imports changed as a result of dumping. The second part of the inquiry, in turn, seeks to determine how these changes in the market for the subject imports affected prices and sales of the domestic like product. The final part of the inquiry builds on the first two parts, and considers how employment and investment in the domestic industry were affected by changes in the industry's prices and sales that occurred consequent to dumping.

In evaluating these questions in this case, I considered, inter alia, the Report prepared by the Commission's Office of

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56/ See, e.g., Internal Combustion Engine Forklift Trucks from Japan, Inv. No. 731-TA-377 (Final), USITC Pub. 2082 (May 1988) (Additional Views of Commissioner Cass); Certain Brass Sheet and Strip from Japan and the Netherlands, Inv. Nos. 731-TA-370 (Final), USITC Pub. 2099 (July 1988) (Dissenting Views of Commissioner Cass).

Investigations and the testimony and submissions of the parties. In addition, I considered the analyses carried out by the Commission's Office of Economics,57/ and the extensive arguments respecting those analyses that were advanced by the parties to these proceedings. In my view, the record in these investigations provides a particularly good example of the manner in which the information provided to the Commission by the Office of Economics, and comments by the parties on that information, can help the Commission identify the issues that are critically important in a Title VII case, highlight the information from our Report or from the parties that merits special attention, and provide guidance to the Commission in evaluating the information and resolving the issues before us. As the various, well-crafted submissions by the parties to these investigations suggest, reasonable persons often can draw very different inferences concerning the economic questions that are central to Title VII investigations. For the reasons that are stated in more detail below, I have concluded that the weight of the evidence on questions critical to the instant investigations is with Petitioner.

A. LTFV Imports

In these investigations, there is persuasive evidence that dumping caused the price of the subject imports to decline substantially. The dumping margins calculated by the

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57/ See USITC Memorandum EC-L-270 (August 5, 1988); USITC Memorandum EC-L-271 (August 5, 1988).

Department of Commerce are, by any measure, large. A dumping margin of 46.46% was calculated for the Italian producers; the margins calculated for the Japanese producers ranged from 51.45% to 103.00%, with an overall sales-weighted average for all of the Japanese producers of 91.74%.58/

Dumping margins cannot be viewed as direct evidence of the amount by which prices of the subject imports declined consequent to dumping, and a given margin will not necessarily signify similar price declines in all cases. In general, dumping causes a decline in the price of imports less than proportional to the full amount of the dumping margin. As explained more fully elsewhere, the percentage decrease will be, in large measure, a function of the proportion of the sales of the subject foreign producer(s) in their combined U.S. and respective home markets that is accounted for by sales in their respective home markets.59/ In the case of Italy, the

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58/ Report at A-7.

59/ See 3.5" Microdisks and Media Therefor from Japan, Inv. No. 731-TA-389 (Preliminary), USITC Pub. 2076 (April 1988) (Additional Views of Commissioner Cass) at 82, n. 100; Certain Bimetallic Cylinders from Japan, Inv. No. 731-TA-383 (Final), USITC Pub. 2080 (May 1988) (Additional Views of Commissioner Cass) at 43-44. For a thorough explication, see USITC Memorandum EC-L-149, Assessing the Effects on the Domestic Industry of Price Dumping, Part I (May 10, 1988) from the Office of Economics at 1, n. 1, 13, 19-21. This estimate may somewhat overstate the price decrease, as it represents an approximate upper bound of that decrease. See USITC Memorandum EC-L-149, supra. This approximation, however, suffices for purposes of our determination of dumping cases. After all, our task here is not precise quantification of dollar losses from dumped imports; instead, we ultimately must decide only whether the injury from dumped imports is material.

percentage decrease amounted to roughly one-half of the dumping margin, since Montefluos' sales in a combined U.S./Italy market were divided about evenly between U.S. and home market sales.60/ In the case of Japan, the decrease was significantly larger relative to the dumping margins of the Japanese producers because home market sales accounted for a greater proportion of the sales of the Japanese producers in their combined U.S. and home markets.61/ For both the Italian and Japanese producers, however, the prices of their U.S. exports declined substantially consequent to dumping, although the percentage price decrease was somewhat smaller for the Italian producers than for the Japanese producers.

It is likely that the change in the price of the subject imports that resulted from dumping produced a large increase in the volume of those products that were sold in the United States. As discussed in more detail in the next Section of these Additional Views, there is significant substitutability between the domestically-produced products and the imported products.

B. Domestic Prices and Sales

I am persuaded that the record evidence as a whole in these investigations indicates that the substantial price and volume changes for the subject imports that accompanied dumping significantly and adversely affected domestic prices and sales.

60/ Report at A-53, Table 20.

61/ Id. at A-55, Table 21.

The subject imports accounted for a substantial share of the domestic market in 1987, the year in which the Department of Commerce determined that dumping occurred. Measured by quantity, the subject imports from Japan and Italy accounted, respectively, for [* *] and [* *] of the domestic market, or [* *] on a cumulated basis.62/ The two countries market shares were somewhat smaller, but still substantial, if measured in terms of value rather than quantity; Japan's market share was [* *] and Italy's [* *], with the two countries together accounting for [* *] of the domestic market.63/

Even substantial market shares, accompanied by evidence of substantial decreases in price and increases in volume of the subject imports, may not necessarily translate into adverse impact on prices and sales in the domestic industry. In certain cases, the imported product simply may not compete to any significant extent with the domestic like product. However, where there is significant substitutability between the domestically-produced and imported products, it is more likely than not that substantial declines in price, and increases in volume, for the subject imports will in fact create significant adverse effects on the prices or sales (or both) of the domestic like product. Although the evidence on this critical issue is mixed in these investigations, I am satisfied that the weight of the evidence indicates that there

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62/ Id. at A-61, Table 26.

63/ Id.

is at least a significant degree of substitutability between the domestically-produced and imported products.

Petitioner argued that, except for "one limited application", domestic granular PTFE "can be easily substituted for imports from Japan and Italy".64/ Petitioner conceded that there currently is no domestically-produced alternative to Respondent Daikin's M-12 product in the production of very thin electrical tape.65/ Nevertheless, for other uses, Petitioner asserted that "all domestic and foreign producers offer a range of specific grades that are highly substitutable for each other, grade-for-grade".66/ In that context, Petitioner pointed to evidence that certain purchasers of granular PTFE "dual source" their PTFE requirements for the same applications.67/

Respondents, on the other hand, took the position that substitutability between domestic granular PTFE and the imported product is much more limited than Petitioner suggests. Respondent Daikin emphasized that there is no disagreement concerning the fact that its M-12 product has certain uses for

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64/ Post-Hearing Brief on Behalf of E.I. Du Pont de Nemours & Co. and Answers to Commission Questions ("Du Pont Posthearing Brief") at 8.

65/ Post Hearing Economic Submission on Behalf of E.I. du Pont de Nemours & Co. in Response to Questions and Requests by the Commission ("Du Pont Economic Submission") Section III, at 7; Pre-Hearing Brief of du Pont de Nemours & Co. ("Du Pont Prehearing Brief") at 27.

66/ Du Pont Economic Submission, Section III, at 7.

67/ Id. at 8; Tr. at 176.

which there is no available domestic substitute.68/ Daikin has advised the Commission that approximately [* *] of the M-12 that it sold in the United States in 1987 -- accounting for [* *] of all Japanese granular PTFE sold in the United States that year -- was used in these unique applications.69/ Both Respondents claimed that there are a variety of other factors that operate to limit substitutability. Respondents argued that customers have marked preferences for particular kinds of granular PTFE based upon their technical requirements.70/ Respondents asserted that the pre-qualification processes carried out by PTFE purchasers make it impossible to switch suppliers.71/ Respondents contended that a large number of customers prefer Petitioner's Teflon products, and that this preference is reflected in the fact that many purchasers specify Teflon when ordering granular PTFE, or are willing to pay a premium for that brand, or both.72/ Finally, Respondents

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68/ Prehearing Brief on Behalf of Daikin Industries, Ltd. ("Daikin Prehearing Brief") at 20-21; Posthearing Brief on Behalf of Daikin Industries, Ltd. ("Daikin Posthearing Brief") at 7.

69/ Daikin Posthearing Brief at Appendix One.

70/ See Daikin Posthearing Brief at 7-8; Tr. at 143-44.

71/ Daikin Posthearing Brief at 8; Tr. 162.

72/ Daikin Prehearing Brief at 23; Daikin Posthearing Brief at 8; Post-Hearing Brief of Ausimont, U.S.A., Inc. ("Ausimont Posthearing Brief") at Attachment 4; Tr. at 135, 162.

argued that long-term contracts and other long-term relationships are prevalent.73/

The evidence presented by Respondents, along with certain other evidence compiled by the Commission staff, indicates that there are clear limits to substitutability between the domestic and imported products. The fact that Daikin's M-12 is used in substantial quantities for applications where there is no domestic substitute, standing alone, significantly limits the substitutability of the domestic product and the subject Japanese imports. The other factors relating to substitutability cited by Respondents also find some independent support in the record. For example, almost one-half of granular PTFE purchasers surveyed by the Commission staff reported that they cannot switch between suppliers of PTFE easily,74/ and roughly 80 percent reported having purchased, on one or more occasions during the period covered by the investigation, granular PTFE from a supplier that was not the lowest-priced supplier.75/ The record also indicates that, although prequalification processes are sometimes completed very quickly, they are often quite lengthy, taking on average four months, according to the data reported to the Commission.76/

73/ Daikin Posthearing Brief at 8-9.

74/ Report at A-66.

75/ Id.

76/ Id. at A-67.

Although these factors plainly limit substitutability, they just as plainly do not eliminate it entirely. Petitioner has presented strong, and for the most part uncontroverted, evidence that there are a broad range of applications for which the domestically-produced and imported products can, and in fact do, compete. This conclusion also is supported by evidence summarized in the Commission's Report.

Accordingly, in my view, the record evidence indicates that the dumped imports caused a significant decline in the price of the domestic like product and in the volume of such products that were sold. Respondents' arguments concerning the possible impact of "downstream demand" on domestic prices do not persuade me to the contrary. Respondents argued that the ability of domestic producers to raise granular PTFE prices was limited because of the competition faced by downstream purchasers of that product.77/ According to Respondents, the ability of the domestic industry to raise prices was limited by the unwillingness of domestic PTFE purchasers to pay increased PTFE prices that would place them at a competitive disadvantage vis-a-vis foreign manufacturers of the products in which granular PTFE is used as an input. There is some force to this argument, although not as much as Respondents would have us attribute to it. For one thing, as Petitioner has pointed out, although granular PTFE may account for a significant proportion

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77/ Daikin Posthearing Brief at 10, Appendix Two; Ausimont Posthearing Brief at Attachment 12 at 7-10; Tr. 113-114, 118, 174.

of the costs of certain products in which it is used as an input, there are also many such products where the cost of granular PTFE is low relative to other inputs.78/ Moreover, Petitioner has also provided the Commission with evidence that foreign granular PTFE prices are currently substantially higher than domestic prices.79/ Both of these factors would tend to reduce the impact on domestic granular PTFE prices of potential downstream foreign competition. I do not believe, therefore, that Respondents have shown that such downstream competition would have kept domestic prices roughly at their historical levels even if no dumping had occurred. However, I believe that this factor may have reduced the impact of the LTFV imports on domestic prices, and that the effect of the LTFV imports on domestic sales was probably somewhat greater than their effect on domestic prices. Even so, the effect on domestic prices was more than de minimis.

These conclusions are similar to those reached by the Commission's Office of Economics through the application of the so-called "CADIC model" developed by that office for the analysis of the effects of dumping on U.S. industry prices and sales.80/ The parties to these investigations also made

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78/ Du Pont Economic Submission, Section III, at 6; USITC Memorandum EC-L-270 (August 5, 1988) from Office of Economics at 30.

79/ Du Pont Economic Submission, Section III, at 6.

80/ See USITC Memorandum EC-L-271 (August 5, 1988) from Office of Economics.

extensive submissions to the Commission based upon this model. Petitioners' and Respondents' use of the CADIC model produced dramatically different estimates of the effect of dumping on domestic prices and sales. Petitioner estimated very high price and sales effects;81/ Respondents estimated price and sales effects which were small and, at least in some cases, inconsequential.82/ This is a natural consequence of the fact that Petitioner and Respondents took sharply contrasting positions on several of the key economic issues -- particularly the substitutability of the domestic and imported products and the responsiveness of domestic demand to changes in price -- that the CADIC model takes into account. In my view, for the reasons previously indicated, the truth respecting these economic arguments lies somewhere between the positions of the opposing parties. I believe that the estimates made by the Office of Economics of these variables are reasonable and preferable to the estimates offered by Petitioner or Respondent. If particular numbers are selected for use in the CADIC model, the mid-points of the ranges estimated by that office appear to be the numbers most consistent with other evidence of record. Accordingly, the estimates derived by the Office of Economics from the model are a better approximation of the effects of the LTFV imports on domestic prices and sales

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81/ Du Pont Economic Submission, Section IV, Attachment 1.

82/ Daikin Posthearing Brief at Appendix Two; Ausimont Posthearing Brief at Attachment 10.

than the various estimates proffered by Petitioner and Respondents. These estimates are consistent with a finding of small, but not insignificant effects.

In the course of these proceedings, certain of the parties, Petitioner in particular, made a number of comments respecting the CADIC model that do not bear directly upon the disposition of these investigations, (especially as both Petitioner and Respondents have advocated use of that model as a source of additional information in this case)83/ but nevertheless deserve special attention here. Petitioner argued, for example, that the CADIC model may underestimate price effects in cases where the effect of dumping on domestic production is so large that the elimination of dumping would bring domestic producers rapidly to the point of full capacity utilization.84/ Petitioner suggested that the results produced by use of the model should therefore be qualitatively interpreted with this possibility in mind.85/ I agree with Petitioner's assertion that there may be cases where the CADIC model could underestimate price effects for the reasons noted by Petitioner, and therefore likewise agree with the suggestion that the model should be used with this potential limitation in mind. However, the cases where there is a risk of such an

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83/ See Du Pont Economic Submission, Section IV, at 8; Daikin Posthearing Brief, Appendix Two, at 1.

84/ Du Pont Economic Submission, Section IV, at 4.

85/ Id.

underestimate will be relatively few, and I do not believe that the record evidence indicates that this case is one of them.

Petitioner also pointed out that the CADIC model assumes perfect competition, and noted that there may be situations where such an assumption is not justified.86/ The assumption of perfect competition is not as substantial a limiting factor as it might first appear, however. There will be many cases where a high degree of competition exists in the marketplace, even though atomistic competition does not exist, and the CADIC model would still provide useful and reasonable estimates of the effects of dumping in such cases. Admittedly, there will be cases where market conditions appear to be non-competitive and where reliance on the model would therefore be inappropriate. The Office of Economics has alerted the Commission to such cases when they have arisen.87/

Petitioner further stated that the CADIC model is not designed to accommodate "exchange-rate cycle dumping".88/ This is true, although it is questionable whether such dumping is more than a rarity under present conditions. In light of the persistent U.S. trade deficit, it seems unlikely that many foreign producers are leaving nominal dollar prices constant despite the decline in the value of the dollar (compared to

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86/ Du Pont Economic Submission, Section IV, at 8-9.

87/ See Certain Granite from Italy and Spain, Inv. No. 731-TA-381 and 382 and 701-TA-289 (Final).

88/ Du Pont Economic Submission, Section IV, at 8.

currencies of many important trading partners) in the expectation that the dollar will soon return to a significantly higher level. If evidence that such dumping were involved should be advanced in any case before us -- and no such evidence was presented in this case -- it should obviously be considered in evaluating the extent to which the Commission should rely upon the estimates produced by the CADIC model.

Petitioner also asserted that it could be difficult to adapt the CADIC model so as to cumulate imports from more than one country under investigation.89/ Although the model does require modification in such circumstances, the process of adapting the CADIC model to cases where imports must be cumulated is not terribly difficult. The Office of Economics generally estimates the cumulated effects of imports by separately estimating the price and sales effects of dumping for each country whose imports are to be cumulated, and then adding the resulting estimates. This process is not as simple as in cases where imports from only one country need be estimated, but it is not especially problematic.

Finally, Petitioner suggested that a "dynamic" model of the effects of dumping would be preferable to a "static" model such as the CADIC model.90/ A well-constructed dynamic model might in fact have several advantages over a static model, but the data that are currently available to the Commission in

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89/ Du Pont Economic Submission, Section IV, at 9.

90/ Du Pont Economic Submission, Section IV, at 9.

Title VII investigations would not enable the Commission to employ such a model at the present time.

In sum, the model used by the Office of Economics is neither perfect nor universally applicable. But it does constitute a reasonable source of additional useful information respecting the effects of dumped imports on domestic industry prices and sales. In this case, the estimates derived from the use of that model by the Office of Economics accords with my reading of other evidence before us, finding such effects to be small but not de minimis.

C. Employment and Investment Effects

The final part of the inquiry respecting the effects of LTFV imports on the domestic industry examines the available information relating to employment and investment returns in the domestic industry in light of the inferences drawn in the prior inquiries. The statute identifies a number of factors that assist the Commission in this assessment, including actual and potential negative effects on employment; actual and potential negative effects on investment; return on investment; cash flow; ability to raise capital; and level of investment.91/

The record evidence concerning these factors is consistent with the conclusion that dumping produced significant adverse effects on domestic prices and production. In 1987, the period when the Department of Commerce determined that dumping

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91/ 19 U.S.C. Section 1677(7)(C).

occurred, the domestic industry incurred substantial operating losses that exceeded by a significant margin those incurred in the preceding years covered by the Commission's investigations.92/ The number of production and related workers, and the total compensation paid to such workers, also declined in 1987.93/ Respondents argue that this data should be dismissed for a variety of reasons.

First, Respondents suggest that the cost allocations that were used in generating Petitioner's financial data are suspect, and that this may have contributed to misleadingly inflated loss figures for the industry as a whole.94/ However, the evidence indicates that the financial data reported by Petitioner were compiled by Petitioner for internal management purposes;95/ accordingly, there is no reasonable basis for any belief that they were gerrymandered in an effort to bolster Petitioner's case in this proceeding. Moreover, my review of the underlying cost allocation methodology that produced the data in question96/ does not suggest to me that it is in any way unreasonable.

92/ Report at A-42, Table 16.

93/ Id. at A-30, Table 11.

94/ See, e.g., Ausimont Posthearing Brief at 5-6; Tr. 110-11.

95/ Tr. at A-50.

96/ Du Pont Posthearing Brief, Answers to Commission Questions, Answer to Question 6.

Respondents also contend that the available data respecting employment and financial returns was skewed because of the poor performance of one domestic producer, Ausimont; supposedly this poor performance resulted from quality problems experienced by that firm, rather than from LTFV imports.97/ Similarly, Respondents argue that the problems, if any, experienced by the domestic industry in 1987 were the product of still other causes unrelated to LTFV imports, including, inter alia, a decline in the industry's exports and inventories.98/ These arguments suggest explanations for much of the change in industry fortunes, but they do not explain enough to negate the inference that the LTFV imports caused material injury. The data collected by the Commission indicate that the problems experienced by the industry in 1987 were not confined to Ausimont,99/ nor do declines in exports and inventories fully account for the industry's experience.100/ In evaluating whether LTFV imports injured the domestic

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97/ See Pre-Hearing Brief of Ausimont, U.S.A., Inc. ("Ausimont Prehearing Brief") at 6-10, 12; Ausimont Posthearing Brief at 6.

98/ See, e.g., Ausimont Posthearing Brief at 6; Daikin Prehearing Brief at 14-17; Daikin Posthearing Brief at 5; Tr. at 11-13, 160.

99/ See Report at A-42, Table 16.

100/ Respondent Ausimont has submitted information to the Commission that purports to adjust, inter alia, for the domestic industry's decline in exports, and appears to show that the industry would have generated substantial operating income in 1987 were it not for this factor. Ausimont Posthearing Brief at Attachment 8. However, the basis for these estimates is unclear and I do not regard them, standing alone, as persuasive evidence on this issue.

industry, the Commission may not weigh various possible causes of injury.101/ The law requires us to make an affirmative determination so long as LTFV imports have caused material injury, even if several other factors independently had adverse effects on the domestic industry as great as or greater than those imports. The evidence here respecting the impact of the subject imports during the period when dumping occurred meets that standard. Respondents offer one final argument to negate that conclusion. They take note of the fact that the performance of the domestic industry improved dramatically by virtually every measure in the first quarter of this year, and claim that this shows that the domestic industry has not been injured.102/ Petitioner, on the other hand, requests the Commission to dismiss the first quarter data as merely reflecting an improvement resulting largely, if not exclusively, from the fact that these investigations have been pending.103/ In my view, Petitioner overstates its case. There is ample reason to believe that the domestic industry's improved fortunes are at least in part a "demand driven boom".104/ By the same token, though, the available data are

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101/ See S. Rep. No. 249, 96th Cong., 1st Sess. 74-75 (1979).

102/ Daikin Prehearing Brief at 2, 6-8; Daikin Posthearing Brief at 1-3; Ausimont Prehearing Brief at 11; Ausimont Posthearing Brief at 3-4; Tr. at 172-73.

103/ Prehearing Brief of ICI Americas Inc. at 22, 25; Du Pont Posthearing Brief at 6; Tr. at 9, 10-11.

104/ See, e.g., Daikin Posthearing Brief at 1-3.

also consistent with the claim that these investigations have contributed to the industry's improved fortunes. In particular, imports from Japan in the first quarter of this year dropped substantially, even though domestic consumption during that period rose dramatically.105/ I do not believe that this development can be, or has been, reasonably explained as anything other than a by-product of these investigations.

D. Conclusions

The evidence in these investigations indicates that the LTFV sales under investigation produced a significant adverse effect on domestic production, and a smaller, but more than de minimis, adverse effect on domestic prices. The available data relating to the financial performance of the domestic industry and, to a lesser extent, employment in that industry, is also consistent with such a conclusion. For these reasons, I conclude that the domestic industry is materially injured by reason of the LTFV sales under investigation.

105/ Report at A-56, Table 22.

INFORMATION OBTAINED IN THE INVESTIGATIONS

Introduction

Following preliminary determinations by the U.S. Department of Commerce ("Commerce") that imports from Italy and Japan of granular polytetrafluoroethylene resin (hereafter granular PTFE) 1/ are being, or are likely to be, sold in the United States at less than fair value (LTFV), the U.S. International Trade Commission, effective April 19, 1988, instituted investigations Nos. 731-TA-385 and 386 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) to determine whether or not an industry in the United States is materially injured or threatened with material injury by reason of such imports. 2/ Notice of the institution of the Commission's final investigations, and of the public hearing to be held in connection therewith, was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of May 4, 1988 (53 F.R. 15902). 3/ The public hearing was held in Washington, DC, on July 13, 1988. 4/

In its final determinations, 5/ published in the Federal Register of July 5, 1988 (53 F.R. 25191) and July 11, 1988 (53 F.R. 26096), Commerce determined that imports of granular PTFE from Japan and Italy, respectively, are being, or are likely to be, sold in the United States at LTFV. The applicable statute directs that the Commission make its final injury determinations by August 16, 1988. The Commission voted on these investigations on August 9, 1988.

Background

These investigations result from a petition filed by E.I. du Pont de Nemours & Co., Inc. (Du Pont), on November 6, 1987, alleging that an industry in the United States is materially injured and threatened with material injury by reason of LTFV imports of granular PTFE from Italy and Japan. In response to that petition, the Commission instituted investigations Nos. 731-TA-385 and 386 (Preliminary) under section 733 of the Tariff Act of 1930 (19 U.S.C § 1673b(a)) and, on December 21, 1987, determined that there was a reasonable indication of material injury by reason of such imports. 6/

1/ Commerce described the merchandise covered by its investigations as "granular polytetrafluoroethylene resin, filled and unfilled, as provided for in item 445.54 of the Tariff Schedules of the United States (TSUS) and currently classifiable under Harmonized System (HS) item no. 3904.61.00." Commerce specifically excluded PTFE fine powder and aqueous dispersions from its investigations.

2/ Material retardation is not at issue in these investigations.

3/ A copy of the Commission's notice of institution of final antidumping investigations is presented in app. A.

4/ A list of the participants in the hearing is presented in app. B.

5/ Copies of Commerce's notices are attached as app. C.

6/ Commissioner Cass was not a member of the Commission at that time.

Previous or Related Commission Investigations

On April 3, 1976, the Commission determined in investigation 337-TA-4 that there was no violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337a) in the importation of expanded, unsintered polytetrafluoroethylene resin in tape form for the reason that the complainant's patent, which was the basis for the allegation of an unfair trade practice, was unenforceable for purposes of section 337.

The Product

Description and uses

Polytetrafluoroethylene (PTFE) resin is a high-performance plastic used to make articles for a variety of applications. This resin is a completely fluorinated homopolymer made by polymerizing the monomer tetrafluoroethylene (TFE) to form a linear molecular structure of repeating $(C_2F_4)_n$ units. PTFE offers excellent chemical and physical properties in four key areas. First, because of its strong interatomic carbon-fluorine bonds, PTFE resin is highly resistant to oxidation and the action of chemicals, including strong acids, alkalies, and oxidizing agents. Second, PTFE resin possesses high-temperature stability, retaining useful properties at temperatures ranging from -240°C to 260°C; in addition, PTFE resin will not support combustion. Third, PTFE resin offers superior dielectric properties, which makes it an outstanding insulator. Finally, PTFE resin has the lowest surface energy of any common solid, giving it the superior antistick performance for which it is most popularly known under the petitioner's trademark, Teflon.

PTFE resins are commercially available in three physically distinct forms: PTFE fine powder (also known as coagulated dispersions), PTFE aqueous dispersions, and granular PTFE resins. These three forms, each of which is discussed below, share the basic chemical and physical properties outlined above but are distinct in the way they are manufactured and processed and in their end uses. The product subject to these investigations is PTFE resin in granular form, which in recent years has represented annually about * * * percent of reported U.S. production of all forms of PTFE resins.

Granular PTFE resins.--Granular PTFE resin is distinct from PTFE fine powder and PTFE dispersions in the way it is manufactured, the way it is processed, and its end uses. Granular PTFE is produced from the monomer through suspension polymerization as opposed to the dispersion polymerization method used for fine powder and dispersions. Because granular PTFE has relatively poor flow properties, it must be molded or extruded under pressure in order to fabricate it into shapes. In addition, granular PTFE will not fibrillate (form fibers), as will fine powder and dispersions. PTFE in the granular form is used in the molding and extrusion of products primarily for the chemical-processing, automotive, and nonelectrical industries.

Granular PTFE resin comes in three general product types--pelletized, fine-cut, and presintered. 1/ The differences among these grades are subtle and are primarily related to the flow characteristics, density, and particle size of the polymers. Industry sources report that in the U.S. market the price spread among the three grades of granular PTFE resin is modest (generally less than 10 percent) and is usually, but not always, related to differences in the degree of processing required to manufacture each grade. In addition, granular PTFE may be mixed with additives to enhance particular characteristics of the resin, resulting in what is referred to as "filled granular PTFE resin" (see below). The price of filled granular PTFE is related to that of the virgin product but will vary depending on the amount and type of filler used and the way in which it is mixed with the virgin material. A discussion of the three types of granular PTFE follows.

Pelletized.--Pelletized granular PTFE is characterized as having soft, medium-size particles of free-flowing granules, offering relatively high-tensile properties. This form of granular PTFE permits a superior balance between handleability and moldability (i.e., ability to mold and sinter into a void-free article), and is processed using semicontinuous automatic and isostatic molding techniques to produce high volumes of small finished parts, such as rings, gaskets, seals, and cylinder tube sections for use as mechanical parts in chemical and food-processing equipment, automobiles, and electronic components. Because pelletized granular PTFE flows into hard-to-fill molds more quickly and uniformly, it contributes to faster production cycle times as well as lending dimensional uniformity to the products into which it is fabricated.

Fine-cut.--Fine-cut granular PTFE is distinguished by its soft, small particles of low bulk density, offering low shrinkage and high tensile-strength properties. Unlike pelletized and presintered grades, fine-cut granular PTFE has poor flow properties. As such, it is processed using nonautomatic, manual molding techniques to produce lower volumes of large- to medium-sized semifinished articles such as billets, which are skived 2/ to make insulating tape for electrical applications and sheets for cladding chemical processing equipment. This form of granular PTFE results in products that offer high electric discharge resistance, low void content, high tensile strength, and a smooth exterior surface.

Presintered.--Presintered granular PTFE can be characterized as granular PTFE having hard, medium- to large-size particles, which are ground and then baked at just below the melting point to enhance the flowability of the granules. 3/ Because it has better flow properties than either pelletized

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1/ These product types are generally referred to as "grades" of granular PTFE, each of which may be offered in additional, slightly modified versions, also referred to as grades (e.g., "pelletized grades of granular PTFE").
2/ Skiving refers to the process whereby a large billet, or block, of material is shaved in thin layers to form tape or sheets.
3/ "Sintering" is a process that involves the welding together of powdered plastic particles at temperatures just below the melting or fusion point of the resin. The particles are fused (sintered) together to form a relatively strong mass, but the mass as a whole does not melt. This is often followed by further heating and/or postforming.

granular PTFE or fine-cut granular PTFE, presintered granular PTFE is fabricated using semicontinuous automatic ram extrusion processes to form long rods, tubes, and shapes, which are later cut and machined to form a variety of mechanical parts for the chemical and electrical industries, among others. Because of the baking process, the presintered resin has more porosity and tends to result in finished products having lower tensile strength and electrical properties than those made from pelletized or fine-cut granular PTFE.

Reprocessed granular PTFE.--Granular PTFE scrap, which is generally rejected or waste material from processors of virgin granular PTFE, can be reprocessed and sold to fabricators for eventual use in less demanding applications. Reprocessing of the virgin material involves the reduction of particle size through repeated cutting processes, chemical cleaning, and drying. Reprocessed scrap is then graded by level of contamination and resold for use in applications where greater tolerances are permitted. The market for reprocessed scrap is estimated at about * * * pounds annually in recent years. 1/

PTFE fine powder and PTFE dispersions.--PTFE fine powder and PTFE aqueous dispersions are made in a different type of vessel from PTFE in the granular form, and they are made by a process called aqueous-dispersion polymerization. In this process, precipitation is avoided through the addition of a dispersing agent, or surfactant, and mild agitation, which keeps the particles separated. Following polymerization, more surfactant can be added to form aqueous dispersions of approximately 60 percent PTFE in water, or the suspended particles can be agglomerated, separated, and dried to make fine powder. Suspension polymerization and dispersion polymerization both result in high-molecular-weight PTFE resins of the same molecular structure; however, the physical characteristics and processability of the resins produced by each method are quite distinct. 2/ Although granular PTFE is processed by molding or ram extrusion methods, fine powder PTFE requires more delicate processing methods since it is extremely sensitive to shear. PTFE fine powders are used in the manufacture of tubing and wire insulation via a paste extrusion process for thin-walled sections. PTFE dispersions usually contain 30 to 60 percent by weight of resin in an aqueous dispersion. PTFE dispersions are sprayed on metal substrates to provide a desired chemical resistance and nonstick, low-friction properties, such as to coat cookware.

Filled.--Fillers to enhance mechanical properties such as wear resistance have been compounded into all three forms of PTFE resin: granular, fine powder, and aqueous dispersions. Filled granular PTFE resins are generally made with the fine-cut granular grades. 3/

1/ * * *.

2/ Kirk-Othmer, Encyclopedia of Chemical Technology, 3rd ed., vol. 11, New York, 1980, pp. 4-6 states, in effect, that the granular PTFE resin is neither substitutable for, nor interchangeable with, PTFE resin made by the aqueous-dispersion process.

3/ According to * * *, filled granular PTFE resins represent about * * * to * * * percent of the volume of all domestically consumed granular PTFE resin.

Fine-cut granular PTFE resins are frequently compounded with fillers and reinforcements in amounts ranging from 5 percent to 70 percent. 1/ These fillers can be used to add strength and enhance mechanical properties without limiting processability. Besides retaining the desirable properties of uncompounded resins, filled compositions meet the requirements of an increased variety of mechanical, electrical, and chemical applications, such as improved wear resistance, hardness, coefficient of expansion, and thermal conductivity. Fillers may also be added merely to impart color so that the ultimate end user can identify the source or dimensions of products such as gaskets, which because of their small size and nonstick surface are difficult to mark with ink. Filled granular resins are made from fine-cut granular PTFE either by mechanically mixing the resin and the filler to produce a low-flow resin, similar in processability to fine-cut granular PTFE, or by combining the materials in a solvent to produce a free-flowing resin with processing characteristics similar to pelletized granular PTFE. Filled granular PTFE compounds are used in such applications as rider rings, bushings, and seals for compressors and automotive systems, and in bearing pads for high-rise buildings and bridges.

Manufacturing process

The production process for granular PTFE resin is reported to be similar for all producers and is designed to optimize the handleability (ability to flow into a mold), moldability (sinterability, degree of shrinkage), and physical and electrical properties of the product. Granular PTFE resin is produced from the monomer, TFE, through a process called suspension polymerization to form agglomerates of resin that are dried and further processed to attain desired shape and particle size. Little or no dispersing agent is used in this method of polymerization, which relies instead on vigorous agitation to produce a precipitated resin.

This process produces a resin consisting of string-like particles of raw polymer. Next, the raw polymer is wet-cut to achieve desired particle size. Then the cut polymers are pelletized (agglomerated) and dried. In addition, the pelletized granular PTFE resin can be ground to produce "fine-cut" granular PTFE resins, or ground and heated to just below the melting point to produce "presintered" granular resins. These operations are carried out using much of the same machinery. To maximize production efficiencies, manufacturers "campaign" products, dedicating the production line for a period of several days to a week to produce a predetermined quantity of one or two of the three grades of granular PTFE. Although each grade involves some variation in production and may require some dedicated machinery, such as the sintering oven used to make presintered granular PTFE resin, generally they are produced on the same machinery, with the same personnel, using similar processes.

1/ Fillers used for compounding with unfilled granular PTFE include glass fibers, graphite, asbestos, or metals such as bronze. Typical combinations include glass fiber at levels of 15 percent and 25 percent by weight, graphite at 15 percent by weight, and bronze at 60 percent by weight. The type and amount of filler used depends upon the end-use product and the properties required in that product's application.

Because PTFE resin has an exceptionally high melt viscosity (well in excess of the melting point of the resin), granular PTFE resin cannot be processed by conventional melt extrusion or by molding techniques used to process most thermoplastic resins. 1/ Methods of molding and extruding granular PTFE resins into fabricated products are similar to those used with powdered metals and ceramics. The basic steps employ compression followed by sintering at high temperatures.

Du Pont reports that the imported granular PTFE resin is comparable in quality and performance to the domestically produced granular PTFE resin and can be substituted for the domestic product in virtually all major end uses. The petitioner further states that PTFE resin is expensive (for example, the granular PTFE is now reportedly sold at an average of about * * * per pound) relative to other plastics and, further, that granular PTFE resin usually competes with exotic metals (for example, "Hastelloy C") in end-use areas where ultra-high performance properties are required. 2/ The petitioner also reports that industry users consider granular PTFE resin to be a "product of last resort" and, in most of its major applications, granular PTFE resin cannot be replaced by other plastics materials.

U.S. tariff treatment

Imports of the granular PTFE resin covered in these investigations are provided for in item 445.54 of the TSUS, a classification that includes all PTFE resins. The column 1 (most-favored-nation) rate of duty for this tariff item, applicable to imports from Italy and Japan, is 0.7 cents per pound plus 5.7 percent ad valorem; the calculated ad valorem equivalent rate of duty for TSUS item 445.54 was 6.8 percent in 1987. 3/

Nature and Extent of Sales at LTFV

On July 5, 1988, Commerce published in the Federal Register its final determination that granular PTFE from Japan is being, or is likely to be, sold in the United States at LTFV. In addition, on July 11, 1988, Commerce published in the Federal Register its final determination that granular PTFE from Italy is being, or is likely to be, sold in the United States at LTFV. The Department's determinations were based on examinations of sales of granular

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1/ Virgin PTFE changes from a white crystalline material to almost a transparent amorphous gel at about 342°C; at 380°C, however, the viscosity of the PTFE is still so high that the melt is form-stable.

2/ Kirk-Othmer, Encyclopedia, p. 18, reports that the high cost of monomer preparation and purification and of polymerization and posttreatments are the main contributors to PTFE's price. Since the PTFE fabrication techniques are different from those of typical thermoplastics and generally involve batch operations, the cost of converting the polymer to an end-use article is also high. Hence, the final product is relatively expensive.

3/ Col. 1 rates of duty are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(d) of the TSUS. Imports of granular PTFE from the latter countries are assessed the col. 2 duty rate of 33.5 percent ad valorem. In addition, special rates of duty are afforded to imports from Israel and from various designated beneficiaries of preferential tariff programs.

PTFE from Italy and Japan during the period June 1, 1987, through November 30, 1987. The weighted-average LTFV margins are presented in the following tabulation (in percent):

Countries and exporters	LTFV margins
Italy:	
Montefluos, S.p.A.	46.46
All others	46.46
Japan:	
Asahi Fluoropolymers Co., Ltd.	51.45
Daikin Industries, Ltd.	103.00
All others	91.74

For each of the companies listed above, Commerce compared the United States price with the foreign market value of such or similar merchandise. Further details concerning the methodologies used by Commerce in calculating margins are presented in its Federal Register notices, copies of which appear in appendix C.

Commerce's final LTFV determination on imports from Italy

Commerce made a final affirmative LTFV determination on sales of the only known Italian producer of granular PTFE, Montefluos, S.p.A. Montefluos' U.S. sales examined by Commerce for the period June 1, 1987, through November 30, 1987, amounted to * * * pounds, valued at * * *. 1/ Commerce found * * * percent of these sales to have been made at LTFV.

Montefluos did not respond to the section of Commerce's questionnaire dealing with imports of filled granular PTFE. As a result, Commerce based its fair value comparisons for these imports on the "best information available," which was the margin alleged in the petition (55 percent). The LTFV margin found on shipments of unfilled granular PTFE was * * * percent. 2/

Commerce's final LTFV determination on imports from Japan

Commerce made a final affirmative determination on sales of the two Japanese producers from which it requested data. 3/ One firm, Daikin Industries, Ltd., chose not to participate in Commerce's investigation. As a result, Commerce applied the best information available to sales by Daikin, which was the margin alleged in the petition (103 percent).

A second firm, Asahi Fluoropolymers Co., Ltd. ("Asahi"), submitted a timely questionnaire response to Commerce. 4/ Asahi's U.S. sales examined by Commerce for the period June 1, 1987, through November 30, 1987, amounted to * * * pounds, valued at * * *. 5/ Commerce found * * * percent of these sales to have been made at LTFV.

1/ Conversation with Brian Nilsson, Commerce case handler, July 15, 1988. Also see 53 F.R. 26096, July 11, 1988.
2/ Conversation with Brian Nilsson, Commerce case handler, July 15, 1988.
3/ See 53 F.R. 25191, July 5, 1988.
4/ Asahi Fluoropolymers Co., Ltd., participated in Commerce's investigation upon its own request.
5/ Conversation with Michael Ready, Commerce supervisor, July 25, 1988.

The U.S. Market

Apparent U.S. consumption

Data on apparent U.S. consumption of granular PTFE were compiled from information submitted in response to questionnaires of the U.S. International Trade Commission. 1/ These data consist of reported shipments of U.S.-produced granular PTFE and reported shipments of imports of granular PTFE from Italy, Japan, and from all other sources. 2/ These data, along with ratios of imports, by source, to apparent consumption are presented in tables 1-3.

Apparent U.S. consumption of granular PTFE rose from about 11 million pounds in 1985 to nearly 13 million pounds in 1986, and continued its increase in 1987 to just under 14 million pounds, for an overall increase of 25 percent (table 1). Consumption also rose in the interim periods, from 3.4 million pounds during January-March 1987 to 4.3 million pounds in the corresponding period of 1988. The ratio of imports to apparent consumption, by quantity, increased overall from 27 percent in 1985 to 29 percent in 1987; however, it dropped sharply to 25 percent in interim 1988 from 31 percent in the corresponding period of 1987.

With regard to unfilled (virgin) granular PTFE, apparent U.S. consumption followed a pattern quite similar to the granular PTFE market as a whole; in terms of quantity, apparent consumption rose steadily during 1985-87, by just over 15 percent, and experienced a sharper rise, in excess of 35 percent, in interim 1988 over that in interim 1987 (table 2). Ratios of the volume of imports to apparent consumption also tracked those for the overall granular PTFE market; they rose from 25 percent in 1985 to 29 percent in 1987, whereas they declined in interim 1988, from nearly 35 percent during January-March 1987 to 26 percent in the corresponding period of 1988. 3/

Apparent consumption of filled granular PTFE, by quantity, increased dramatically by nearly 80 percent during 1985-87 (table 3). In addition, it showed a smaller increase in interim 1988 to 1.2 million pounds, from 1.1 million pounds in interim 1987. The ratio of imports to apparent consumption declined consistently throughout the period when viewed in terms of tonnage; falling from 16 percent in 1985 to 12 percent in 1987, and again in the interim periods from 7.6 percent in January-March 1987 to 5.3 percent in the corresponding period of 1988.

1/ These data represent primary consumption of granular PTFE resins. Because some purchasers (processors) make their own filled resins, these data may understate final consumption of filled granular resins. In addition, data on filled and unfilled material do not sum to "total" granular PTFE because sales or transfers of the unfilled product to firms that make the filled product are excluded from the data presented on total consumption (and shipments) in order to avoid double-counting.

2/ The vast majority of imports from other sources are from West Germany.

3/ The shares of apparent U.S. consumption in 1987 of unfilled granular PTFE held by U.S. producers and foreign exporters, by trade name, are presented in app. D.

Table 1
Granular PTFE: U.S.-produced domestic shipments, shipments of imports, and apparent U.S. consumption, in terms of quantity and value, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
U.S.-produced domestic shipments 2/	8,010	9,406	9,761	2,332	3,222
U.S. shipments of imports	2,932	3,312	3,897	1,053	1,046
Apparent U.S. consumption 2/	10,942	12,718	13,658	3,385	4,268
	Value (1,000 dollars)				
U.S.-produced domestic shipments 2/	38,033	43,606	44,690	10,376	14,585
U.S. shipments of imports	11,892	13,531	15,411	4,468	4,464
Apparent U.S. consumption 2/	49,925	57,137	60,101	14,844	19,049
	Ratio of imports to apparent consumption (%)				
Quantity	26.8	26.0	28.5	31.1	24.5
Value	23.8	23.6	25.6	30.1	23.4

1/ Shipments by * * * have been excluded from the data in order to avoid double counting.
2/ Excludes shipments of reprocessed (scrap) PTFE.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Consumption of granular PTFE is largely derived from the demand for the products into which granular PTFE is fabricated. These products include, among others, gaskets, seals, and rings for use in the automotive industry; gaskets, linings, and packings for chemical applications; and insulators and tape for electrical applications.

Table 2
Unfilled granular PTFE: U.S.-produced domestic shipments, shipments of imports, and apparent U.S. consumption, in terms of quantity and value, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March- 1987	1988
	Quantity (1,000 pounds)				
U.S.-produced domestic shipments 1/	7,647	8,000	8,364	1,834	2,875
U.S. shipments of imports	2,560	2,746	3,401	969	984
Apparent U.S. consumption	10,207	10,746	11,765	2,803	3,859
	Value (1,000 dollars)				
U.S.-produced domestic shipments 1/	34,615	33,900	34,970	7,697	12,242
U.S. shipments of imports	10,514	11,663	13,068	4,087	4,183
Apparent U.S. consumption	45,129	45,563	48,038	11,784	16,425
	Ratio of imports to apparent consumption (%)				
Quantity	25.1	25.6	28.9	34.6	25.5
Value	23.3	25.6	27.2	34.7	25.5

1/ Excludes shipments of reprocessed (scrap) PTFE.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3
Filled granular PTFE: U.S.-produced domestic shipments, shipments of imports, and apparent U.S. consumption, in terms of quantity and value, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
U.S.-produced domestic shipments	1,940	3,220	3,658	1,016	1,113
U.S. shipments of imports 1/	372	566	496	84	62
Apparent U.S. consumption	2,312	3,786	4,154	1,100	1,175
	Value (1,000 dollars)				
U.S.-produced domestic shipments	10,405	17,358	19,194	4,832	5,489
U.S. shipments of imports 1/	1,378	1,868	2,343	381	281
Apparent U.S. consumption	11,783	19,226	21,537	5,213	5,770
	Ratio of imports to apparent consumption (%)				
Quantity	16.1	14.9	12.0	7.6	5.3
Value	11.7	9.7	10.9	7.3	4.9

1/ Based on reported imports; because filled granular PTFE is made to order and is not generally held in inventory, these figures are believed to approximate shipments of imports made during the period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Market factors

The petitioner and respondents in these investigations generally agree that imported granular PTFE competes directly with the U.S.-produced product and that both are sold through similar channels of distribution to similar markets. 1/ Sales representatives typically carry a range of their companies' fluoropolymer products, such as PTFE fine powder and aqueous dispersions, and melt-processable fluoropolymers. Although granular PTFE from one producer can be substituted for that from another with a fair amount of ease, there are quality differences and performance characteristics that enable purchasers to differentiate among sources. In some cases, differentiation is based on criteria such as level of purity and dielectric strength. 2/ In other cases, differentiation has more to do with how well the material performs on the individual processor's equipment or how easily it is fabricated into the specific items the processor manufactures.

The ability to fabricate granular PTFE into the desired product in a cost-efficient manner is the purchaser's primary concern. Processing conditions, such as temperature, feed rate, and pressure, have to be adjusted according to

1/ Unless otherwise indicated, the following discussion pertains equally to all grades of granular PTFE, including the filled product.
2/ Dielectric strength refers to the ability of a material, when used for insulating purposes, to take a powerful electrical charge before breaking down.

the specific grade and source of granular PTFE. As such, processors must "qualify" each producer's product to determine whether the cost and time involved in adjusting and/or retooling their machinery to utilize a different source of granular PTFE is justified by the potential gains from having the option to switch to a new, perhaps lower cost or superior-quality source of the resin. 1/ Once qualified, one producer's granular PTFE can be interchanged with that of another fairly easily, although the ease of switching will vary depending on the application and may still require adjustments to machinery and equipment. 2/

Respondents argue that this qualification process serves as a barrier to entry into the U.S. granular PTFE market, raising the cost and time involved in winning market share. This process allegedly is made more difficult because of the inherent value of Du Pont's Teflon trademark. It is not uncommon, respondents maintain, for end users to list Teflon as a specification, requiring processors to use it even when higher quality and/or lower cost alternatives are available. 3/

Channels of distribution

U.S.-produced and imported Italian and Japanese granular PTFE are sold through similar channels of distribution to similar markets. There are no known uses for the granular PTFE resins that have not undergone further processing and no sales reported directly to end users. There are no known independent distributors in the granular PTFE market. The vast majority of granular PTFE is sold to processors that mold the resin directly into finished intermediate products such as gaskets, seals, bearings, and insulating tape, or that make stock shapes such as sheet or rod to be machined by downstream manufacturers.

There are approximately * * * processors of granular PTFE in the United States, * * * of which are reported to be large, sophisticated companies with their own engineering and technical support staffs. 4/ Processors, in turn, sell these parts and stock shapes to end users, typically manufacturers of automobiles, chemical plant equipment, food-processing machinery, and a variety of other final products. Processors of filled granular PTFE either make the

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1/ According to Ausimont U.S.A., the qualification process can take anywhere from several months, for applications where performance is not critical, to a year, where standards are more demanding. In some instances, the processor's customer may want to test and qualify the granular PTFE under the conditions in which the fabricated article will ultimately be used. This can take from a year to 18 months. See Transcript of preliminary conference, p. 137. In response to a marketing survey commissioned by Du Pont prior to filing its petition, the majority of the purchasers responding to the relevant question indicated that the length of time required to qualify a new supplier is less than 2 months. See Post-conference brief of Du Pont, app. A.

2/ Daikin claims that there is no domestic substitute for its "M-12" granular PTFE in making ultra-thin releasing film. M-12 used in this application accounted for * * * percent of total imports of granular PTFE from Japan in 1987. See posthearing brief of Daikin, p. 7.

3/ Daikin estimates that about * * * percent of all U.S. purchase orders for granular PTFE specify Teflon. See posthearing brief of Daikin, p. 8.

4/ Notes from visit to Ausimont U.S.A., Nov. 20, 1987.

filled compound themselves or purchase it from a compounder. 1/ Compounders are firms that specialize in making filled compounds for use by processors. 2/ In 1987, more than 95 percent of U.S.-produced unfilled granular PTFE was sold to unrelated processors and compounders. Ausimont reported that over * * * percent of its shipments of Italian granular PTFE were to unrelated processors, with the remainder sold to compounders. Over 80 percent of imported Japanese unfilled granular PTFE was sold to unrelated processors, with most of the remainder reported as shipped to compounders and certain Sumitomo branch offices. * * *.

All three domestic producers market and sell granular PTFE through a sales division of their own organization on a nationwide basis. Most warehousing facilities are * * *, although both * * * maintain a national network of warehouses. Producers maintain * * *, determined according to * * *. These levels generally enable U.S. producers to * * *. Granular PTFE imported from Italy is sold by the same sales people who sell Ausimont's domestically produced product. Channels of distribution for imports from Japan are similar to those for the U.S. producers. Gunze sells virgin granular PTFE throughout the United States, whereas Sumitomo serves primarily the Northeast.

U.S. producers

During the period of investigation, five producers of granular PTFE, filled or unfilled, were identified: Du Pont (the petitioner), ICI Americas, Inc., 3/ Ausimont U.S.A., Inc., Custom Compounding, Inc., and Whitford Polymers, Inc. These producers furnished varying levels of useful information in response to the Commission's questionnaires.

All five producers of granular PTFE are located in the northeast region of the United States; however, the larger producers of the virgin product, such as ICI and Du Pont, distribute the product nationally through a series of warehouses. Accordingly, transportation costs do not appear to be a significant factor in meeting the needs of a national market.

Du Pont is by far the largest U.S. producer of unfilled granular PTFE, holding a * * *-percent share of the unfilled granular PTFE market. 4/ It produces unfilled granular PTFE, along with PTFE fine powder and dispersions, at its Washington Works plant in Parkersburg, WV. 5/ Du Pont does not produce filled granular PTFE or reprocessed (scrap) PTFE in the United States. 6/

1/ Compounders do not produce virgin granular PTFE. Instead, they purchase large volumes of fine-cut unfilled granular PTFE from the major producers and importers. The staff knows of four compounders producing for the commercial market in the United States. Currently, the largest compounder is ICI Americas (formerly LNP Corp.), with production facilities in Thorndale, PA.

2/ Some firms consider compounders to be a type of processor. In reporting the distribution of shipments in 1987, Du Pont and ICI included shipments to compounders in reported shipments to processors.

3/ Prior to March 1985, ICI Americas' operations producing filled granular PTFE were owned by LNP Corp., a unit of Beatrice Chemical.

4/ Based on 1987 domestic shipments.

5/ The Washington Works plant produces a number of other fluoropolymer resins, including * * *.

6/ In a conversation with Commission staff, a Du Pont official reported that Du Pont makes filled compounds in the Netherlands and Japan for sale in the European and Asian markets.

Du Pont has foreign granular PTFE-producing facilities in the Netherlands and in Japan. The Netherlands plant, located in Dordrecht, is operated by a wholly owned subsidiary, Du Pont de Nemours (Nederland), B.V., which began operations in the late 1960's. The Japanese plant is operated as part of a * * *-percent joint venture with Mitsui Petrochemical Industries, Ltd., and is located in Shizuoka, Japan. Both the Dutch and Japanese plants produce and export filled granular PTFE resins. The Seagram Co., a Canadian corporation, owns a * * *-percent share of Du Pont.

Du Pont was the original commercial developer and marketer of granular PTFE, which it introduced to the market in 1946 under the trade name Teflon. Du Pont held a patent on the production of granular forms of Teflon until 1964.

ICI Americas, Inc. (ICI), is the second largest U.S. producer of unfilled granular PTFE resin, accounting for * * * percent of domestic shipments in 1987. ICI produces unfilled granular PTFE resin in its plant in Bayonne, NJ, which it has operated since the mid-1960's. ICI also produces filled granular PTFE resin in plants in Thorndale, PA, and West Chester, PA, and produces reprocessed (scrap) PTFE in a plant in Santa Ana, CA. Prior to 1985, ICI's filled and reprocessed granular PTFE operations were owned by LNP Corp. In 1985, ICI American Holdings, Inc., which owns * * * percent of ICI Americas, purchased LNP Corp., which at the time was the largest U.S. producer of filled granular PTFE resins. 1/ ICI Americas, however, continued to manage the unfilled and filled granular PTFE businesses separately, under the name LNP, until January 1, 1988. At that point, the operations were combined as the ICI Fluoropolymers section of the ICI Advanced Materials Group, which is part of ICI Americas, Inc. 2/ Based on 1987 domestic shipments, ICI currently holds a * * *-percent share of the primary U.S. filled granular PTFE market.

The third U.S. producer of unfilled granular PTFE is Ausimont U.S.A., Inc. (Ausimont), headquartered in Morristown, NJ, which in 1987 accounted for * * * percent of domestic shipments of unfilled granular PTFE and * * * percent of domestic shipments of filled granular PTFE. Ausimont is * * *-percent owned by a holding company, Ausimont N.V. of the Netherlands, which in turn is * * *-percent owned by the Italian chemical conglomerate, Montedison S.p.A. In the United States, Ausimont produces unfilled granular PTFE in facilities in Elizabeth, NJ, and produces filled granular PTFE and reprocessed (scrap) PTFE in Metuchen, NJ. It acquired both facilities from Allied-Signal Co. in June 1986. 3/ * * *. Ausimont imports filled and unfilled granular PTFE from a sister corporation, Montefluos S.p.A., in Alessandria, Italy.

1/ ICI American Holdings is a wholly owned subsidiary of Imperial Chemical Industries PLC (U.K.), Ltd. (ICI PLC), headquartered in London, England. ICI PLC also produces granular PTFE in Japan, in a joint venture with Asahi Fluoropolymers Co., Ltd.

2/ * * *.

3/ With regard to the Elizabeth plant, Ausimont * * *.

In addition to Ausimont and ICI, there are two small producers of filled granular PTFE: Custom Compounding, Inc., with production facilities in Aston, PA, and Whitford Polymers, Inc., with production facilities in Leesport, PA, and Wheeling, IL. Based on domestic shipments, Custom Compounding and Whitford Polymers held * * *- and * * *-percent shares, respectively, of the filled granular PTFE market in 1987. Whitford Polymers was founded in November 1985, * * *. Unlike ICI and Ausimont, both producers generally manufacture to special order, and for a limited segment of the market. * * *.

U.S. importers

According to the Customs net import file, 54 firms imported under TSUS item 445.54 during the period of investigation. Of these 54, the staff selected 24 firms that imported significant quantities under this tariff item, and sent questionnaires to those firms. 1/ These 24 firms accounted for virtually all imports from Italy and Japan entered into the United States during the period of investigation. The staff received data from nine firms, including data from the three U.S. producers of unfilled granular PTFE, which also imported these products. Nine additional firms responded that they did not import products subject to the investigations during the periods covered. Six importers did not respond to the questionnaire. The companies that responded are believed to have accounted for nearly all imports of the subject products from Italy and Japan and for the majority of such imports from other sources during the period of investigation.

Imports during the period of investigation were distributed fairly evenly across the United States. Most importers that responded to the Commission's questionnaire reported entering the majority of their shipments through the ports of New York or Newark. Significant amounts of imports, however, were noted at other ports of entry, notably Los Angeles, Chicago, and Houston.

Ausimont U.S.A., Inc., is the only significant importer of granular PTFE resins from Italy. It imports granular PTFE resins, both filled and unfilled, from its related sister company, Montefluos S.p.A., in Alessandria, Italy. Prior to the establishment of Ausimont U.S.A. in 1987, imports from Italy were handled by the New York office of Montedison S.p.A., the parent company of Montefluos S.p.A. Shipments of imports of granular PTFE from Italy accounted for * * * percent of apparent U.S. consumption in 1987.

In contrast to the pattern of imports from Italy, imports from Japan entered the United States through several different sources. Imports of granular PTFE manufactured by Daikin Industries, Ltd., were made virtually exclusively by two trading companies: Sumitomo Corp., Inc., and Gunze New York, Inc., accounting for * * * percent and * * * percent of imports from Japan, respectively. Smaller quantities of imports from Japan were entered by Du Pont and ICI Americas from joint ventures in Japan with Mitsui Fluorochemicals, Ltd., and Asahi Fluoropolymers Co., Ltd., respectively. 2/ Shipments of imports of granular PTFE from Japan accounted for * * * percent of apparent U.S. consumption in 1987.

1/ The staff determined that a firm imported "significant quantities" if it imported over 10,000 pounds per year.
2/ Du Pont and ICI Americas have * * *.

The staff also collected information on imports of PTFE fine powder and dispersions (see app. E); imports of such products from Japan were made primarily by * * *.

Consideration of Alleged Material Injury to an Industry in the United States

The information in this section of the report is based on data received from responses to Commission questionnaires. With regard to U.S. production of unfilled granular PTFE, the Commission received responses from the three known producers of this product, accounting for 100 percent of U.S. production during the period of investigation. With regard to production of filled granular PTFE, the staff originally sent questionnaires to 41 firms that it had reason to believe may have produced the filled product during the period of investigation. Of these firms, 26 responded that they did not produce either filled or unfilled granular PTFE. Eleven firms did not respond to the Commission's questionnaire; however, there is no indication on the record that any of these firms produce filled granular PTFE. Accordingly, the Commission received responses from all the known producers of filled granular PTFE (see the section of this report entitled "U.S. producers" for further details concerning these firms).

U.S. production, capacity, and capacity utilization

U.S. capacity to manufacture granular PTFE increased annually from 15 million pounds in 1985 to 18 million pounds in 1987 (table 4). Capacity rose slightly in the interim periods. Capacity increases between 1985 and 1986 were largely attributable to the entry of Whitford Polymers into the filled granular PTFE business and * * *; capacity increases for facilities producing only unfilled granular PTFE were small. Du Pont reportedly plans to expand its annual granular PTFE capacity * * * by 1991. 1/

Production of granular PTFE rose slightly from 1985 to 1986, but fell in 1987 by 8 percent, from 12.5 million pounds in 1986 to 11.5 million pounds in 1987. This was due primarily to a 14-percent decline in production of the unfilled product; production of the filled product climbed steadily throughout 1985-87. Production in interim 1988 of unfilled granular PTFE showed a substantial increase of 41 percent from 1.9 million pounds in January-March 1987. Filled granular PTFE production also increased noticeably in January-March 1988 compared with that in the corresponding period of 1987. Overall, granular PTFE production rose to a level of 3.75 million pounds in the first quarter of 1988, representing an increase of 34 percent from that in the first quarter of 1987.

1/ Posthearing brief of Du Pont, pt. II, p. 1.

Table 4
Granular PTFE: U.S. producers' average-of-period capacity, production, and capacity utilization, by firms, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
Capacity:					
Unfilled granular PTFE:					
Ausimont 2/.....	***	***	***	***	***
ICI 3/.....	***	***	***	***	***
Du Pont 3/.....	***	***	***	***	***
Total.....	11,400	11,650	11,800	2,975	2,975
Filled granular PTFE:					
Ausimont 2/.....	***	***	***	***	***
ICI (LNP) 4/.....	***	***	***	***	***
Custom Compounding 5/....	***	***	***	***	***
Whitford Polymers 6/.....	***	***	***	***	***
Total.....	3,506	6,216	6,227	1,498	1,600
All granular PTFE:					
Ausimont 2/.....	***	***	***	***	***
Custom Compounding 5/....	***	***	***	***	***
Du Pont 3/.....	***	***	***	***	***
ICI.....	***	***	***	***	***
Whitford Polymers 6/.....	***	***	***	***	***
Total.....	14,906	17,866	18,027	4,473	4,575
Production:					
Unfilled granular PTFE:					
Ausimont.....	***	***	***	***	***
ICI.....	***	***	***	***	***
Du Pont.....	***	***	***	***	***
Total.....	9,011	9,064	7,826	1,919	2,713
Filled granular PTFE:					
Ausimont.....	***	***	***	***	***
ICI (LNP).....	***	***	***	***	***
Custom Compounding.....	***	***	***	***	***
Whitford Polymers.....	***	***	***	***	***
Total.....	2,051	3,435	3,719	872	1,036
All granular PTFE:					
Ausimont.....	***	***	***	***	***
Custom Compounding.....	***	***	***	***	***
Du Pont.....	***	***	***	***	***
ICI.....	***	***	***	***	***
Whitford Polymers.....	***	***	***	***	***
Total.....	11,062	12,499	11,545	2,791	3,749

Footnotes presented at end of table.

Table 4--Continued
Granular PTFE: U.S. producers' average-of-period capacity, production, and capacity utilization, by firms, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
	Percent				
Capacity utilization:					
Unfilled granular PTFE:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Average	79.0	77.8	66.3	64.5	91.2
Filled granular PTFE:					
Ausimont	***	***	***	***	***
ICI (LNP)	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	58.5	55.3	59.7	58.2	64.8
All granular PTFE:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	74.2	70.0	64.0	62.4	81.9

1/ Does not include production of reprocessed (scrap) PTFE.
2/ Based on facilities operating * * * hours per week, * * * weeks per year.
3/ Based on facilities operating * * * hours per week, * * * weeks per year.
4/ Based on facilities operating * * * hours per week, * * * weeks per year.
5/ Based on facilities operating * * * hours per week, * * * weeks per year.
6/ Based on facilities operating * * * hours per week, * * * weeks per year.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

With regard to capacity utilization, facilities producing unfilled granular PTFE saw capacity utilization decline steadily to 66 percent in 1987 from 79 percent in 1985. Capacity utilization increased markedly in interim 1988 to 91 percent from 65 percent in the corresponding period of 1987. Facilities producing filled granular PTFE saw little change in their capacity utilization during the period of investigation, except for a rise of 7 percentage points in interim 1988, when compared with that in interim 1987.

Overall, capacity utilization for granular PTFE fell from 74 percent in 1985 to 64 percent in 1987, and then increased to 82 percent in January-March 1988 from 62 percent in January-March 1987. 1/

With regard to unfilled granular PTFE, there are no restraints on production other than capacity. The raw material from which granular PTFE is produced is TFE monomer, which for safety and other reasons is manufactured on-site. The capacity, therefore, to produce granular PTFE is limited by the amount of TFE that can first be produced. 2/ In turn, the primary feedstock for the TFE monomer is a chlorofluorocarbon known as "G-22." There were no constraints on availability of this product during the period of investigation. Indeed, there is speculation that because of the ban on certain chlorofluorocarbons (variants of G-22) that have been found to cause damage to the earth's ozone layer, producers of those chlorofluorocarbons will shift into increased production of G-22. 3/ If this should occur, the supply of feedstock for TFE production may well increase in the near future.

U.S. producers' domestic and export shipments

All granular PTFE.--Total domestic shipments of granular PTFE by U.S. producers increased strongly from 8.0 million pounds in 1985 to 9.4 million pounds in 1986, representing an increase of 17 percent, and then increased further by 3.8 percent in 1987, to a level of 9.8 million pounds (table 5). Domestic shipments increased sharply during January-March 1988, rising by 38 percent from shipments in the corresponding period of 1987. Unit values declined throughout the 1985-87 period, but increased slightly in interim 1988 when compared with interim 1987.

1/ It is important to view the increase in capacity utilization in light of communications received from various processors of the unfilled product. See, e.g., letter from John A. MacIntyre to Acting Chairman Brunsdale, July 11, 1988. Such communications have maintained that there is currently a severe shortage of unfilled granular PTFE, and that * * * in particular has not been able to meet demand. Du Pont has not commented on the alleged shortage. ICI has acknowledged that the market is currently "somewhat tight" and has "extended" some shipments but has placed no customer on allocation. See posthearing brief of ICI, p. 8.

Further, since the institution of these investigations, both Du Pont and ICI have announced plans to expand capacity. Du Pont plans to increase worldwide capacity for fluorocarbon resins by 30 percent over the next 5 years. See Annex C, Du Pont prehearing brief. By 1990, ICI's unfilled granular capacity at Bayonne, NJ, is expected to * * *. See Ausimont posthearing brief, app. 15.

2/ It should be noted that the largest U.S. producer of unfilled granular PTFE, Du Pont, currently has * * * pounds of idle TFE capacity. See Du Pont post-hearing brief, Sec. III, p. 3.

3/ * * *.

Table 5
Granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1/ 1985-87, January-March 1987, and January-March 1988 2/

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	8,010	9,406	9,761	2,332	3,222
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont 3/	***	***	***	***	***
ICI 3/	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Grand total	***	***	***	***	***
	Value (1,000 dollars)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	38,033	43,606	44,690	10,376	14,585
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont 3/	***	***	***	***	***
ICI 3/	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Grand total	***	***	***	***	***

Footnotes presented at end of table.

Table 5--Continued
Granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1/ 1985-87, January-March 1987, and January-March 1988 2/

Item	1985	1986	1987	January-March-- 1987	1988
	Unit value (per pound)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	$4.74	$4.64	$4.58	$4.45	$4.53
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont 3/	***	***	***	***	***
ICI 3/	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***

1/ Shipments by * * * have been excluded from the data in order to avoid double counting.
2/ Does not include shipments of reprocessed granular PTFE.
3/ Contains a small amount of company transfers; therefore, the sum may not be equal to the total of domestic and export shipments.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

At * * * pounds, export shipments * * * in 1986 from their 1985 level, but then plummeted to * * * pounds, a decrease of * * * percent, in 1987. 1/ Export shipments * * * in interim 1988 over those in interim 1987. The unit value of export shipments increased steadily during 1985-87. Unit values dropped by * * * percent in January-March 1988 from those in the corresponding period of 1987, but still remained well above the levels of 1985 and 1986.

Trends in the quantity of U.S. producers' total shipments during 1985-87 were similar to those associated with domestic shipments. Unit values rose slightly during the period. Quantities and unit values both increased in interim 1988 when compared with those during interim 1987.

Unfilled granular PTFE.--Domestic shipments of U.S.-produced unfilled granular PTFE increased by less than 5.0 percent from 1985 to 1986, then slightly less markedly from 1986 to 1987, for an overall 2-year increase of 9.4 percent (table 6). Between January-March 1987 and January-March 1988, domestic shipments of the unfilled product increased by almost 57 percent. Unit values declined throughout the period, except for a slight rise in interim 1988, representing a 1.4-percent increase over those in interim 1987. Export shipments were virtually unchanged in 1986 from their 1985 total of * * * pounds, but then declined sharply by * * * percent in 1987. Exports rebounded in January-March 1988, rising to * * * pounds from their January-March 1987 level of * * * pounds, an increase of * * * percent. The unit value of export shipments rose steadily during 1985-87; however, it declined by * * * percent in January-March 1988 compared with the unit value in the corresponding period of 1987.

Total U.S. shipments of the unfilled product showed a slight increase of * * * percent during 1985-87 as the rise in domestic shipments outweighed the fall in exports. The recovery in exports in the interim 1988 period contributed to the surge in the level of total shipments from * * * pounds in interim 1987 to * * * pounds in interim 1988, representing a rise of * * * percent. Unit values fell overall from 1985 to 1987, as falling unit values for domestic shipments outweighed rising unit values for exports.

As seen in table 7, fine-cut granular PTFE consistently held the largest share (54-64 percent) of shipments of U.S.-produced unfilled granular PTFE throughout the period of investigation, although this share was declining continuously prior to interim 1988. 2/ Presintered grade registered the fastest rate of growth, increasing from 9 percent of the market in 1985 to 14 percent in 1987.

1/ * * *.

2/ Fine-cut grade is the one most commonly used in the production of filled granular PTFE.

Table 6
Unfilled granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
Domestic shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Total	7,647	8,000	8,364	1,834	2,875
Export shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
ICI 2/	***	***	***	***	***
Du Pont 2/	***	***	***	***	***
Grand total	***	***	***	***	***
	Value (1,000 dollars)				
Domestic shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Total	34,615	33,900	34,970	7,697	12,242
Export shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
ICI 2/	***	***	***	***	***
Du Pont 2/	***	***	***	***	***
Grand total	***	***	***	***	***

Footnotes presented at end of table.

Table 6--Continued
Unfilled granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
	Unit value (per pound)				
Domestic shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Average	$4.53	$4.24	$4.18	$4.20	$4.26
Export shipments:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Average	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
ICI 2/	***	***	***	***	***
Du Pont 2/	***	***	***	***	***
Average	***	***	***	***	***

1/ Does not include shipments of reprocessed granular PTFE.
2/ Contains a small amount of company transfers.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 7
Unfilled granular PTFE: U.S. producers' domestic shipments and company transfers, by grades, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
Pelletized:					
Quantity (1,000 pounds).....	***	***	***	***	***
Value (1,000 dollars).....	***	***	***	***	***
Unit value.....	***	***	***	***	***
Share of total shipments, by quantity (percent).....	24.1	25.3	25.4	24.2	24.0
Fine-cut:					
Quantity (1,000 pounds).....	***	***	***	***	***
Value (1,000 dollars).....	***	***	***	***	***
Unit value.....	***	***	***	***	***
Share of total shipments, by quantity (percent).....	63.8	58.0	53.7	54.2	57.8
Presintered:					
Quantity (1,000 pounds).....	***	***	***	***	***
Value (1,000 dollars).....	***	***	***	***	***
Unit value.....	***	***	***	***	***
Share of total shipments, by quantity (percent).....	8.6	11.6	14.4	16.0	12.3

1/ Data exclude shipments of reprocessed (scrap) PTFE and other "custom" grades, produced primarily by * * *, not classifiable in these categories; as a result, shares do not add to 100 percent.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Filled granular PTFE.--U.S. producers of filled granular PTFE experienced sharp increases in domestic shipments, both in terms of quantity (89 percent) and value (84 percent), during 1985-87 (table 8). Domestic shipments also rose from the interim 1987 level of 1.0 million pounds to 1.1 million pounds in interim 1988. Unit values of domestic shipments exhibited an overall decline in the 1985-87 period, then registered a small increase of 3.6 percent in interim 1988 over those in interim 1987.

Reported export shipments of filled granular PTFE were fairly insubstantial during the period of investigation. Accordingly, trends in the quantity, value, and unit value of total shipments by U.S. producers of filled granular PTFE paralleled those of domestic shipments.

Table 8
Filled granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	1,940	3,220	3,658	1,016	1,113
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Grand total	***	***	***	***	***
	Value (1,000 dollars)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	10,405	17,358	19,194	4,832	5,489
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Grand total	***	***	***	***	***

Table 8--Continued
Filled granular PTFE: U.S. producers' domestic shipments, export shipments, and total shipments, by firms, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Unit value (per pound)				
Domestic shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	$5.36	$5.39	$5.25	$4.76	$4.93
Export shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***
Total shipments:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

U.S. producers of granular PTFE were requested to provide data on the quantity and value of their total domestic shipments and company transfers for 1981-84. These data, by company, are presented in app. F.

PTFE fine powder and dispersions.--U.S. shipments of PTFE fine powder and dispersions accounted for a combined share of approximately * * * percent of the total PTFE market during the period of investigation (table 9). During 1985-87, shipments of fine powder and shipments of dispersions followed opposite trends; PTFE fine powder shipments fell by * * * percent, whereas shipments of PTFE dispersions rose from * * * pounds to * * * pounds, representing an increase of * * * percent. By 1987, PTFE dispersions accounted for a slightly larger share of the overall PTFE market than did PTFE fine powder. This trend in relative shares continued in the interim periods, as shipments of both products rose slightly.

Table 9
PTFE fine powder and dispersions: U.S. producers' domestic shipments and company transfers, by types, 1985-87, January-March 1987, and January-March 1988

*	*	*	*	*	*	*

U.S. producers' inventories

Inventory data were provided by all five firms producing granular PTFE during the period of investigation (table 10). U.S. producers' end-of-period inventories of granular PTFE increased by * * * percent from 1.7 million pounds in 1985 to * * * pounds in 1986 before decreasing sharply, by * * * percent, to * * * pounds in 1987. For 1985-87, the trend in inventories of the unfilled product tracked the overall trend, whereas inventories of filled granular PTFE showed an overall increase of 15 percent. January-March 1988 inventory figures for the granular PTFE producers as a whole showed a marked drop, of * * * percent, compared with those in the corresponding period of 1987. Inventory figures for unfilled granular PTFE producers showed a similar trend, and filled granular PTFE inventories increased slightly.

As a share of domestic shipments by producers that reported inventory data, 1986 inventories of granular PTFE declined slightly from such inventories in 1985, before falling more markedly to a level of * * * percent in 1987. This ratio dropped even more drastically in the interim periods, falling in interim 1988 to less than one-half of its interim 1987 level. Trends in this ratio among producers of unfilled granular PTFE were generally similar in direction, but somewhat more exaggerated. For the filled granular PTFE market, this ratio also declined throughout; however, the decrease in the interim periods was slight. In general, for unfilled and filled PTFE, and for the market as a whole, interim 1988 ratios were far below such ratios during 1985.

Table 10
Granular PTFE: U.S. producers' end-of-period inventories, by firms, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
End-of-period inventories:					
Unfilled granular PTFE:					
Ausimont	***	***	***	***	***
ICI	***	***	***	***	***
Du Pont	***	***	***	***	***
Total	1,495	***	***	***	835
Filled granular PTFE:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	252	317	290	***	***
All granular PTFE:					
Ausimont	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Grand total	1,747	***	***	***	***
	Ratio of end-of-period inventories to domestic shipments (percent)				
Unfilled granular PTFE	20.8	***	***	1/ ***	1/ 7.5
Filled granular PTFE	13.0	9.8	7.9	1/ ***	1/ ***
All granular PTFE	21.8	***	***	1/ ***	1/ ***

1/ Based on annualized shipments.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

U.S. employment, wages, and productivity

Granular PTFE.--The number of workers employed in the production of granular PTFE increased by 11 percent from 181 in 1985 to 201 in 1986 before declining to 198 workers, representing a decline of 1.4 percent, in 1987 (table 11). The number of hours worked by these employees increased by 1.9 percent in 1986 compared with hours worked in 1985, but declined by virtually the same amount in 1987 to its approximate 1985 level. Hourly compensation increased throughout the period, from $16.02 in 1985 to nearly $17.00 in 1987. During January-March 1988, the number of production workers and hours worked increased by 5.7 percent and 7.4 percent, respectively, compared with the number of workers and hours worked in the corresponding period of 1987. Hourly compensation also increased during interim 1988 compared with that in interim 1987.

Table 11
Average number of production and related workers producing granular PTFE, hours worked, wages and total compensation paid to such employees, labor productivity, hourly compensation, and unit labor production costs, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
Production and related workers (PRW):					
Number	181	201	198	189	200
Percentage change 1/	2/	10.9	-1.4	2/	5.7
Hours worked by PRW:					
Number (1,000 hours)	408	416	407	95	102
Percentage change 1/	2/	1.9	-2.1	2/	7.4
Wages paid to PRW:					
Value (1,000 dollars)	5,188	5,950	5,701	1,308	1,535
Percentage change	2/	14.7	-4.2	2/	17.4
Total compensation paid to PRW:					
Value (1,000 dollars)	6,538	6,960	6,846	1,570	1,823
Percentage change	2/	6.5	-1.6	2/	16.1
Labor productivity for PRW:					
Pounds per hour	27.10	30.05	24.17	25.41	32.26
Percentage change	2/	10.9	-19.6	2/	27.0
Hourly compensation paid to PRW:					
Value (per hour)	$16.02	$16.73	$16.82	$16.61	$17.96
Percentage change 1/	2/	4.5	0.5	2/	8.1
Unit labor costs:					
Value (per pound)	$0.59	$0.56	$0.70	$0.65	$0.56
Percentage change 1/	2/	-5.8	25.0	2/	-14.8

1/ Calculated from unrounded data.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Labor productivity, as measured by pounds produced per hour, exhibited an overall decline of 11 percent from 1985 to 1987. During January-March 1988, however, labor productivity increased by 27 percent compared with productivity in the corresponding period of 1987. U.S. producers' unit labor costs rose from $0.59 per pound in 1985 to $0.70 in 1987, representing a 19-percent increase. Unit labor costs, however, in interim 1988 showed a 15-percent drop from those in interim 1987, to a level below that of 1985.

Unfilled granular PTFE.--The trend in the total number of production and related workers employed in the production of unfilled granular PTFE was similar to that demonstrated in the granular PTFE market as a whole; first rising slightly, then declining during 1986-87 for an overall decline of 6.1 percent (table 12). Hours worked by those workers, however, fell steadily during 1985-87, before moving upward, by 8.3 percent, in January-March 1988 compared with hours worked in January-March 1987. Total wages paid to production and related workers producing unfilled granular PTFE rose slightly, by 5.8 percent, from 1985 to 1986, declined by 10 percent in 1987, and increased by 14 percent between January-March 1987 and January-March 1988. Total compensation paid to these workers decreased steadily during 1985-87, but then rose markedly in the interim periods; average hourly compensation, however, rose consistently throughout.

The productivity of workers producing unfilled granular PTFE exhibited a general decline between 1985 and 1987, falling 19 percent over the 3-year period. Between January-March 1987 and the corresponding period of 1988, however, the productivity of these workers rose from 25.5 pounds per hour to 34.4 pounds per hour, or by more than 35 percent. Unit labor costs rose markedly in the 1985-87 period, but fell during interim 1988 when compared with such costs during interim 1987. Unit labor costs by the end of the period of investigation approximated those in 1985.

Filled granular PTFE.--All four producers reported information regarding employment in the production of filled granular PTFE. According to these data, as presented in table 13, the number of workers employed in the production of filled granular PTFE, the hours worked in such production, and the wages and compensation paid to such workers all showed increases from 1985 to 1987, ranging from 51 to 76 percent. For all these indicators, increases continued in interim 1988 compared with interim 1987. Labor productivity also increased during 1985-87, by 19 percent overall, as unit labor costs, in contrast to those for unfilled granular PTFE, trended downward.

Workers at Ausimont U.S.A.'s Elizabeth plant and employees of Allied-Signal that produce filled granular PTFE at Ausimont's Metuchen plant are represented by the Organization of Chemical and Atomic Workers (OCAW). Workers at ICI Americas' Bayonne, NJ, plant are represented by the Bayonne Chemical Workers Union. Employees of Du Pont, Custom Compounding, and Whitford Polymers do not have union representation.

In its questionnaire, the Commission requested U.S. producers to provide detailed information concerning reductions in the number of production and related workers producing granular PTFE, if such reductions involved at least 5 percent of the workforce, or 50 workers. * * * reported such layoffs. * * * attributed both of its reductions in force to * * *. * * * layoffs in * * * were attributed to the * * *; subsequent layoffs in * * * resulted from * * *. The reported layoffs are shown in the following tabulation:

* * * * * * *

Table 12
Average number of production and related workers producing unfilled granular PTFE, hours worked, wages and total compensation paid to such employees, labor productivity, hourly compensation, and unit labor production costs, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	January-March-- 1988
Production and related workers (PRW):					
Number	132	136	124	123	127
Percentage change 2/	1/	3.1	-8.7	1/	3.3
Hours worked by PRW:					
Number (1,000 hours)	315	287	265	60	65
Percentage change 2/	1/	-8.9	-7.7	1/	8.3
Wages paid to PRW:					
Value (1,000 dollars)	4,261	4,510	4,072	920	1,044
Percentage change	1/	5.8	-9.7	1/	13.5
Total compensation paid to PRW:					
Value (1,000 dollars)	5,394	5,261	4,919	1,111	1,287
Percentage change	1/	-2.5	-6.5	1/	15.8
Labor productivity for PRW:					
Pounds per hour	28.61	31.58	23.09	25.48	34.43
Percentage change	1/	10.4	-26.9	1/	35.1
Hourly compensation paid to PRW:					
Value (per hour)	$17.12	$18.33	$18.56	$18.52	$19.80
Percentage change 2/	1/	7.0	1.3	1/	6.9
Unit labor costs:					
Value (per pound)	$0.60	$0.58	$0.80	$0.73	$0.58
Percentage change 2/	1/	-3.0	38.5	1/	-20.9

1/ Not available.
2/ Calculated from unrounded data.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 13
Average number of production and related workers producing filled granular PTFE, hours worked, wages and total compensation paid to such employees, labor productivity, hourly compensation, and unit labor production costs, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
Production and related workers (PRW):					
Number	49	65	74	66	73
Percentage change	1/	32.7	13.8	1/	10.6
Hours worked by PRW:					
Number (1,000 hours)	93	129	142	35	37
Percentage change 2/	1/	38.4	10.2	1/	5.8
Wages paid to PRW:					
Value (1,000 dollars)	927	1,440	1,629	388	491
Percentage change	1/	55.3	13.1	1/	26.5
Total compensation paid to PRW:					
Value (1,000 dollars)	1,144	1,699	1,927	459	536
Percentage change	1/	48.5	13.4	1/	16.8
Labor productivity for PRW:					
Pounds per hour	22.01	26.63	26.17	25.28	28.38
Percentage change	1/	21.0	-1.7	1/	12.3
Hourly compensation paid to PRW:					
Value (per hour)	$12.28	$13.17	$13.56	$13.30	$14.68
Percentage change	1/	7.2	3.0	1/	10.4
Unit labor costs:					
Value (per pound)	$0.56	$0.49	$0.52	$0.53	$0.52
Percentage change 2/	1/	-11.3	4.8	1/	-1.7

1/ Not available.
2/ Calculated from unrounded data.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Financial experience of U.S. producers

Five U.S. producers, accounting for virtually all reported domestic shipments of granular PTFE in 1987, provided usable income-and-loss data on their unfilled and/or filled granular PTFE operations as well as their overall operations. 1/ Ausimont U.S.A. acquired Allied-Signal's granular PTFE production facilities at Elizabeth, NJ, in June 1986. Whitford Polymers, Inc., began operations on September 1, 1985.

Unfilled granular PTFE operations.--The income-and-loss data on the unfilled granular PTFE operations of each individual company are presented in table 14. 2/ Total net sales of granular PTFE declined by 6.0 percent from $38.9 million in 1985 to $36.5 million in 1986 and then increased by 3.1 percent to $37.3 million in 1987. During the interim period ended March 31, 1988, such sales rose by 60 percent to $12.9 million compared with $8.1 million in the corresponding period of 1987.

Producers of unfilled granular PTFE reported aggregate operating losses in each period except interim 1988. Such operating losses increased steadily from $1.2 million in 1985 to $1.8 million in 1986 and peaked at $4.1 million in 1987. The average operating loss margin rose from 3.2 percent in 1985 to 4.9 percent in 1986 and then jumped to 11.1 percent in 1987. During the interim period ended March 31, 1988, the industry reported an aggregate operating income of $701,000, equivalent to 5.4 percent of net sales compared with an operating loss of $637,000, or 7.9 percent of net sales, in the corresponding period of 1987.

* * * * * * *

TFE monomer is the major raw material used to make granular PTFE. CFC 22 (Du Pont's "Freon 22") is the main raw material in making TFE monomer. * * *. The following tabulation shows the effect on the average operating profit or (loss) margins of Du Pont and the unfilled granular PTFE industry of excluding these transfer profits or losses on "Freon 22" from Du Pont's data (in percent):

* * * * * * *

As seen in the tabulation, except for the industry average during 1985-86, the trends in the operating income or (loss) margins of both Du Pont and the industry as a whole remain the same as those shown in table 14. The operating loss margins of the industry are higher in 1985 and 1987, lower in 1986 and interim 1987, and the operating income margin for interim 1988 is higher than the margins shown in table 14.

1/ These firms are Du Pont, ICI Americas, Ausimont U.S.A., Custom Compounding, and Whitford Polymers. * * *.

2/ Selected financial data on the unfilled granular PTFE operations of these companies, calculated on a per-unit basis, are presented in app. G.

Table 14
Income-and-loss experience of U.S. producers on their operations producing unfilled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31-- 1987	1988
	Value (1,000 dollars)				
Net sales:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	38,882	36,539	37,284	8,076	12,931
Cost of goods sold:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	33,843	32,484	34,780	7,447	10,240
Gross profit or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	5,039	4,055	2,504	629	2,691
General, selling, and administrative expenses:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	6,279	5,840	6,639	1,266	1,990
Operating income or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	(1,240)	(1,785)	(4,135)	(637)	701

Footnotes presented at end of table.

Table 14--Continued
Income-and-loss experience of U.S. producers on their operations producing unfilled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Value (1,000 dollars)--Continued				
Startup expenses:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	***	***	***	***	***
Interest expenses:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	***	***	***	***	***
Other income or (expense):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	***	***	***	***	***
Net income or (loss) before income taxes:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	(1,995)	(2,019)	(4,864)	(814)	476
Depreciation and amortization:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/ 2/	***	***	***	***	***
Ausimont U.S.A. 1/ 3/	***	***	***	***	***
Total	***	***	***	***	***
Cash-flow: 4/					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Total	***	***	***	***	***

Footnotes presented at end of table.

Table 14--Continued
Income-and-loss experience of U.S. producers on their operations producing unfilled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31-- 1987	1988
	Ratio to net sales (percent)				
Cost of goods sold:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Average	87.0	88.9	93.3	92.2	79.2
Gross profit or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Average	13.0	11.1	6.7	7.8	20.8
General, selling, and administrative expenses:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Average	16.1	16.0	17.8	15.7	15.4
Operating income or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Average	(3.2)	(4.9)	(11.1)	(7.9)	5.4
Net income or (loss) before income taxes:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal 1/	***	***	***	***	***
Ausimont U.S.A. 1/	***	***	***	***	***
Average	(5.1)	(5.5)	(13.0)	(10.1)	3.7

1/ Ausimont U.S.A. started production of granular PTFE in the United States in June 1986, just after purchasing granular PTFE production facilities from Allied-Signal.
2/ * * *.
3/ * * *.
4/ Cash-flow is defined as net income or (loss) plus depreciation and amortization.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

* * * * * * *

Filled granular PTFE operations.--The income-and-loss data on the filled granular PTFE operations of each firm are shown in table 15. Du Pont does not produce filled granular PTFE. ICI produces filled granular PTFE in its plant in West Chester, PA (Tetraloy division), which was acquired from Whitford Chemical Co. in 1973. ICI obtained other filled granular PTFE production facilities by purchasing LNP Corp., a unit of Beatrice Chemical, in February 1985. The Tetraloy division was merged into LNP on January 1, 1986; therefore, these data are for 10 months' operations. * * *.

Producers of filled granular PTFE reported aggregate operating losses of $97,000, or 0.5 percent of net sales, in 1986, compared with an operating income of 4.6 percent on its sales in 1985. These producers earned an aggregate operating income of $344,000, or 1.8 percent of net sales, in 1987. During the interim period ending March 31, 1988, U.S. producers reported an aggregate operating income of $603,000, or 7.2 percent of net sales, compared with an operating loss of $16,000, or 0.3 percent of net sales, in the corresponding period of 1987.

* * * * * * *

Total granular PTFE operations.--The combined income-and-loss data on unfilled and filled granular PTFE operations, by firm, are presented in table 16. Total net sales of granular PTFE decreased by 10 percent from 1985 to 1986 and then increased by 4.0 percent from 1986 to 1987. During the interim periods, sales rose by 49 percent from 1987 to 1988. The trends for operating income margins on granular PTFE operations are similar to those for unfilled granular PTFE operations during the period covered by the investigations.

Table 15
Income-and-loss experience of U.S. producers on their operations producing filled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31-- 1987	1988
	Value (1,000 dollars)				
Net sales:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	20,896	17,642	19,262	6,332	8,427
Cost of goods sold:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	17,695	15,949	16,766	5,741	7,063
Gross profit or (loss):					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	3,201	1,693	2,496	591	1,364
General, selling, and administrative expenses:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	2,240	1,790	2,152	607	761
Operating income or (loss):					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	961	(97)	344	(16)	603

Footnotes presented at end of table.

Table 15--Continued
Income-and-loss experience of U.S. producers on their operations producing filled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Value (1,000 dollars)--Continued				
Other income or (expense): 3/					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Net income or (loss) before income taxes:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Depreciation and amortization:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/ 4/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Cash-flow: 5/					
ICI 1/	***	***	***	***	***
Allied-Signal 2/ 6/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
	Ratio to net sales (percent)				
Cost of goods sold:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	84.7	90.4	87.0	90.7	83.8

Footnotes presented at end of table.

Table 15--Continued
Income-and-loss experience of U.S. producers on their operations producing filled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Ratio to net sales (percent)--Continued				
Gross profit or (loss):					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	15.3	9.6	13.0	9.3	16.2
General, selling, and administrative expenses:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	10.7	10.1	11.2	9.6	9.0
Operating income or (loss):					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	4.6	(0.5)	1.8	(0.3)	7.2
Net income or (loss) before income taxes:					
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***

1/ ICI's LNP data for 1985 are for 10 months because ICI bought its filled granular PTFE production facilities from Beatrice Chemical in late February 1985.
2/ Ausimont U.S.A. started production of granular PTFE in the United States in June 1986, just after purchasing granular PTFE production facilities from Allied-Signal.
3/ None of the firms reported any start-up or interest expenses.
4/ * * *.
5/ Cash flow is defined as net income or (loss) plus depreciation and amortization.
6/ * * *.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 16
Income-and-loss experience of U.S. producers on their operations producing granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31-- 1987	1988
	Value (1,000 dollars)				
Net sales:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	57,721	51,755	53,801	13,769	20,538
Cost of goods sold:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	49,369	45,871	48,445	12,491	16,491
Gross profit or (loss):					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	8,352	5,884	5,356	1,278	4,047
General, selling, and administrative expenses:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	8,424	7,489	8,557	1,824	2,681
Operating income or (loss):					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	(72)	(1,605)	(3,201)	(546)	1,366

Footnotes presented at end of table.

Table 16--Continued
Income-and-loss experience of U.S. producers on their operations producing granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Value (1,000 dollars)--Continued				
Startup expenses:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Interest expenses:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Other income or (expense):					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Net income or (loss) before income taxes:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***
Depreciation and amortization:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/ 4/	***	***	***	***	***
Ausimont U.S.A. 2/ 3/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total	***	***	***	***	***

Footnotes presented at end of table.

Table 16--Continued
Income-and-loss experience of U.S. producers on their operations producing granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Value (1,000 dollars)--Continued				
Cash-flow: 5/					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/ 3/	***	***	***	***	***
Ausimont U.S.A. 2/ 4/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Total 5/	***	***	***	***	***
	Ratio to net sales (percent)				
Cost of goods sold:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	85.5	88.6	90.0	90.7	80.3
Gross profit or (loss):					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	14.5	11.4	10.0	9.3	19.7
General, selling, and administrative expenses:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	14.6	14.5	15.9	13.2	13.1

Footnotes presented at end of table.

Table 16--Continued
Income-and-loss experience of U.S. producers on their operations producing granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31--1987	Interim period ended Mar. 31--1988
	Ratio to net sales (percent)--Continued				
Operating income or (loss):					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	(0.1)	(3.1)	(5.9)	(4.0)	6.7
Net income or (loss) before income taxes:					
Du Pont	***	***	***	***	***
ICI 1/	***	***	***	***	***
Allied-Signal 2/	***	***	***	***	***
Ausimont U.S.A. 2/	***	***	***	***	***
Custom Compounding	***	***	***	***	***
Whitford Polymers	***	***	***	***	***
Average	***	***	***	***	***

1/ ICI's LNP data for 1985 are for 10 months because ICI bought its filled granular PTFE production facilities from Beatrice Chemical in late February 1985. ICI's company transfers of unfilled granular PTFE are excluded from combined sales and combined cost of goods sold.
2/ Ausimont U.S.A. started production of granular PTFE in the United States in June 1986, just after purchasing granular PTFE production facilities from Allied-Signal. In addition, Ausimont's company transfers of unfilled granular PTFE from its Elizabeth to its Metuchen facilities are excluded from combined sales and combined cost of goods sold.
3/ * * *.
4/ * * *.
5/ Cash-flow is defined as net income or (loss) plus depreciation and amortization.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Overall establishment operations.--The income-and-loss data for U.S. producers' establishments within which granular PTFE is produced are shown in table 17. The share of unfilled granular PTFE sales declined from 11.9 percent in 1985 to 10.1 percent in 1987, but increased to 11.7 percent in interim 1988. The share of filled granular PTFE dropped from 6.7 percent in 1985 to 5.5 percent in 1986 and 1987, then rose to 7.9 percent in interim 1988. Overall establishment net sales increased by 13 percent from $310.7 million in 1985 to $351.2 million in 1987. Operating income declined precipitously from $39.2 million in 1985 to $22.0 million in 1986 and then rose to $28.3 million in 1987. The operating income margin fell sharply from 12.6 percent in 1985 to 6.8 percent in 1986 and then increased to 8.1 percent in 1987. During the interim period ending March 31, 1988, net sales increased by 20 percent but the operating income margin declined slightly, to 12.0 percent compared with 12.3 percent in the corresponding period of 1987.

Investment in productive facilities.--Du Pont, ICI, Ausimont, and Whitford Polymers provided data concerning the valuation of property, plant, and equipment used in the production of all products of their establishments and in the production of unfilled and filled granular PTFE. These data are presented in table 18.

Aggregate investment in property, plant, and equipment used in the production of unfilled granular PTFE, valued at cost, increased from $35.1 million in 1985 to $44.1 million in 1987 and to $45.2 million as of March 31, 1988. * * *.

* * * * * * *

* * *. Aggregate investment in property, plant, and equipment used in the production of filled granular PTFE, valued at cost, rose from * * * in 1985 to * * * in 1987 and to * * * as of March 31, 1988. * * *'s investment accounted for the majority of the aggregate investment.

Table 17
Income-and-loss experience of U.S. producers on the overall operations of their establishments within which granular PTFE is produced, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31-- 1987	1988
	Value (1,000 dollars)				
Net sales	310,654	321,920	351,245	88,917	106,858
Cost of goods sold	209,473	233,130	253,178	62,538	76,440
Gross profit	101,181	88,790	98,067	26,379	30,418
General, selling, and administrative expenses	62,008	66,827	69,737	15,427	17,571
Operating income	39,173	21,963	28,330	10,952	12,847
Startup expenses	***	***	***	***	***
Interest expense	***	***	***	***	***
Other income, net	***	***	***	***	***
Net income before income taxes	35,096	18,788	23,619	9,635	11,620
Depreciation and amortization included above	11,782	18,328	20,946	5,191	6,313
Cash-flow 1/	46,878	37,116	44,565	14,826	17,933
	Share of net sales (percent)				
Cost of goods sold	67.4	72.4	72.1	70.3	71.5
Gross profit	32.6	27.6	27.9	29.7	28.5
General, selling, and administrative expenses	20.0	20.8	19.9	17.3	16.4
Operating income	12.6	6.8	8.1	12.3	12.0
Net income before income taxes	11.3	5.8	6.7	10.8	10.9
Unfilled granular PTFE net sales	11.9	10.7	10.1	8.7	11.7
Filled granular PTFE net sales	6.7	5.5	5.5	7.1	7.9
	Number of firms reporting				
Operating losses	***	***	***	***	***
Net losses	***	***	***	***	***
Data	5	5	5	5	5

1/ Cash-flow is defined as net income before income taxes plus depreciation and amortization.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 18
Granular PTFE: Value of property, plant, and equipment of U.S. producers, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

(In thousands of dollars)

Item	As of end of accounting year--			Interim period ended Mar. 31--	
	1985	1986	1987	1987	1988
All products of establishments:					
Original cost	247,257	291,547	309,674	299,935	314,895
Book value	106,474	124,227	129,270	128,645	127,677
Return on fixed assets 1/	38.0	18.1	21.8	8.4	9.7
Unfilled granular PTFE:					
Original cost	35,096	41,080	44,079	41,854	45,157
Book value	14,520	17,133	17,727	17,130	17,835
Return on fixed assets 1/	(1.6)	(6.8)	(20.0)	(3.1)	4.3
Filled granular PTFE:					
Original cost	***	***	***	***	***
Book value	***	***	***	***	***
Return on fixed assets 1/	***	***	***	***	***

1/ Defined as operating income or (loss) divided by book value of fixed assets.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Capital expenditures.--Five producers furnished data on their total capital expenditures used in the manufacture of all products of the reporting establishments and their capital expenditures related to the production of unfilled and filled granular PTFE. These data are shown in the following tabulation (in thousands of dollars):

Period	All establishment products	Granular PTFE		
		Unfilled	Filled	Total
1985	36,124	2,432	***	***
1986	20,723	2,565	***	***
1987	24,499	2,911	***	***
January-March--				
1987	6,424	687	***	***
1988	5,919	875	***	***

Total capital expenditures for unfilled granular PTFE rose by 20 percent from $2.4 million in 1985 to $2.9 million in 1987. During January-March 1988, such capital expenditures increased to $875,000, compared with $687,000 in the corresponding period of 1987. The majority of unfilled granular PTFE capital expenditures were incurred by * * *. * * * direct capital expenditures related to unfilled granular PTFE ranged from * * * to * * * percent of its total establishment capital expenditures during the period covered by the investigations. * * *.

Total capital expenditures for filled granular PTFE increased from * * * in 1985 to * * * in 1987 and from * * * in January-March 1987 to * * * in January-March 1988. * * *.

Research and development expenses.--Research and development expenditures by Du Pont, ICI, Ausimont, and Custom Compounding in connection with all products produced in their establishments as well as for unfilled and filled granular PTFE were compiled from questionnaire data and are presented in the following tabulation (in thousands of dollars):

Period	All establishment products	Granular PTFE		
		Unfilled	Filled	Total
*	*	*	*	*

Research and development expenses related to unfilled granular PTFE more than doubled from * * * in 1985 to * * * in 1987, but fell by * * * percent to * * * during January-March 1988 compared with * * * in the corresponding period of 1987. The majority of such research and development expenses were incurred by Du Pont but it indicated that * * *. Ausimont U.S.A. incurred research and development expenses in connection with the operation of granular PTFE of * * *. Allied-Signal's data on research and development expenses were not available for the period 1985 through June 1986. ICI reported * * * of research and development expenses with respect to filled granular PTFE in its Tetraloy division in 1985. All other small amounts of research and development expenses during the reporting period were incurred by Custom Compounding.

Impact of imports on capital and investment.--The U.S. producers of granular PTFE were asked to describe any actual or potential negative effects of imports of granular PTFE from Italy and Japan on their firms' growth, investment, and ability to raise capital. Excerpts from producers' comments are provided in appendix H.

Consideration of the Question of Threat of Material Injury

Section 771(7)(F)(i) of the Tariff Act of 1930 (19 U.S.C. §1677(7)(F)(i)) provides that--

> In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of any merchandise, the Commission shall consider, among other relevant factors 1/--
>
> (I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),
>
> (II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,
>
> (III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,
>
> (IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,
>
> (V) any substantial increase in inventories of the merchandise in the United States,
>
> (VI) the presence of underutilized capacity for producing the merchandise in the exporting country,
>
> (VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury, and
>
> (VIII) the potential for product-shifting if production facilities owned or controlled by the foreign manufacturers, which can be used to produce products subject to investigation(s) under section 701 or 731 or to final orders under section 736, are also used to produce the merchandise under investigation.

1/ Section 771(7)(F)(ii) of the act (19 U.S.C. § 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."

The available data on foreign producers' operations (items (II) and (VI), above) are presented in the section entitled "Ability of foreign producers to generate exports," and information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV), above) is presented in the section entitled "Consideration of the causal relationship between the LTFV imports and the alleged injury." Item I, regarding subsidies, is not relevant in these investigations. The potential for "product-shifting" (item (VIII)) is not an issue in these investigations because there are no known producers subject to investigation(s) or to final orders which use production facilities that can be shifted to produce granular PTFE. Available data on U.S. inventories of the subject product (item (V)) follow.

U.S. importers' inventories

All major importers of granular PTFE from Italy and Japan reported information on their end-of-period inventories during the period of investigation (table 19). From 1985 to 1987, end-of-period inventories of granular PTFE imports from Italy * * *, with their 1987 level * * * that of 1985. End-of-period inventories also * * *, by * * * percent, in January-March 1988 compared with those in the corresponding period of 1987. The ratio of end-of-period inventories to reported shipments of imports from Italy * * * from * * * percent in 1985 to * * * percent in 1987. Between January-March 1987 and the corresponding quarter in 1988, the ratio of inventories to reported annualized shipments of imports from Italy * * * from * * * percent to * * * percent.

Table 19
Granular PTFE: End-of-period inventories of imports from Italy and Japan held in the United States, and reported shipments of imports from such sources, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
End-of-period inventories of reported imports from--					
Italy (1,000 pounds).....	***	***	***	***	***
Japan (1,000 pounds).....	***	***	***	***	***
Total (1,000 pounds)....	548	462	606	563	561
Reported shipments of imports from--					
Italy (1,000 pounds).....	***	***	***	***	***
Japan (1,000 pounds).....	***	***	***	***	***
Total (1,000 pounds)....	2,151	2,506	2,885	794	765
Ratio of end-of-period inventories to reported shipments of imports from:					
Italy (percent).....	***	***	***	***	***
Japan (percent).....	***	***	***	***	***
Italy and Japan (percent)	25.5	18.4	21.0	1/ 17.7	1/ 18.3

1/ Based on annualized shipments of imports.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Reported end-of-period inventories held by importers of the Japanese product declined throughout the period, by more than * * * percent during 1985-87. As a percentage of shipments of imports from Japan, 1987 end-of-period inventories were less than one-half the 1985 level. During the 1988 interim period, this ratio dropped still further.

End-of-period inventories of combined imports from Japan and Italy first declined, by 16 percent in 1986 from their 1985 level, and then increased by 31 percent in 1987. When January-March 1988 end-of-period inventories of imports from the two countries are viewed in comparison with those in interim 1987, it can be seen that * * *. As a share of total shipments of imports from the two countries, end-of-period inventories exhibited an overall decline from 1985 to 1987, and rose slightly in interim 1988 when viewed against those in the corresponding period of 1987.

Ability of foreign producers to generate exports

The Italian industry.--Montefluos, S.p.A., a subsidiary of Ausimont, N.V., is the sole Italian producer of granular PTFE. Montefluos manufactures both unfilled and filled granular PTFE at its plant in Spinetta, Italy (Alessandria). Data on Montefluos are presented in table 20.

Part of Montefluos' production of unfilled granular PTFE during the period of investigation was manufactured in France under the terms of a tolling arrangement with Produits Chimiques Ugine Kuhlmann, S.A. (PCUK), with production facilities in Pierre-Benite, France. The arrangement involves the * * *. According to counsel for Ausimont U.S.A., * * *. * * *. 1/ * * *. * * *. For the purposes of this report, capacity and production data for the Pierre-Benite plant are not included in 1985 and 1986 data. 2/

Italian production of granular PTFE * * * steadily throughout the period of investigation, * * * by * * * percent to a 1987 level of * * * pounds from * * * pounds in 1985. Production * * * strongly in the interim periods as well, by * * * percent; moreover, production is expected to be slightly * * * in calendar year 1988 than in 1987. 3/

With regard to unfilled granular PTFE, production trends were similar. Production of filled granular PTFE at Spinetta, in contrast, fluctuated narrowly throughout the period. Production of filled granular PTFE during 1988 is expected to * * * to * * * pounds, a level * * * percent * * * that during the peak year of 1986.

1/ * * *.

2/ Ausimont U.S.A. also provided data on granular PTFE shipped to and from the Pierre-Benite facility during the period of investigation. These data, along with * * * capacity and production data for the Pierre-Benite plant, are presented in app. I.

3/ Projections of 1988 capacity and production are based on information supplied by counsel for Ausimont, U.S.A.

Table 20
Granular PTFE: Montefluos S.p.A.'s production, capacity, capacity utilization, home-market sales, and export shipments, 1985-87, January-March 1987, and January-March 1988

* * * * * * *

Capacity to produce all types of granular PTFE in Italy * * * by * * * percent from * * * pounds in 1985 to * * * pounds in 1987, primarily because of the * * *. Since 1987, capacity has * * *; capacity is expected to * * * approximately * * * pounds by the end of 1988. Unfilled granular PTFE capacity exhibited similar trends. Filled granular PTFE capacity * * * gradually throughout the period.

Capacity utilization at the Spinetta facilities producing both filled and unfilled PTFE * * * to over * * * percent in 1986 from * * * percent in 1985, before returning to * * * percent in 1987. Capacity utilization in January-March 1988 was * * * percent, * * * percentage points * * * that in the interim period of 1987. Overall granular PTFE capacity utilization is expected to * * * during 1988. Again, trends in capacity utilization associated with facilities producing unfilled granular PTFE mirrored overall trends. Movements in capacity utilization ratios of facilities producing filled granular PTFE, however, exhibited an overall * * * throughout the period.

Montefluos' exports to the United States of granular PTFE * * * throughout the period, * * * percent from 1985 to 1987. Exports to the United States of unfilled and filled product, when viewed separately, demonstrated similar trends. Home-market sales of granular PTFE, in contrast, * * * steadily, by * * * percent from 1985 to 1987. Again, as with exports, movements in home-market sales of the unfilled and filled products tracked the overall trends.

As a percentage of Italian granular PTFE production, exports to the United States * * * slowly throughout 1985-87, to * * * percent in 1987. In January-March 1988, this ratio reached a level of * * * percent, well * * * the 1987 figure, but * * * from the level in the corresponding period of 1987. Movements in this ratio, when viewed in terms of unfilled granular PTFE, demonstrated no particular trend. Exports to the United States of filled granular PTFE, however, * * * dramatically as a share of production, from * * * percent in 1985 to * * * percent in 1987, before * * * just as dramatically in interim 1988 to * * * percent. This ratio, though, still showed * * * over that recorded in January-March 1987.

The share of granular PTFE exports to the United States, as a share of total exports of granular PTFE, showed a slight overall * * *, from * * * percent in 1985 to * * * percent in 1987, but later * * * to * * * percent in January-March 1988, compared with * * * percent in the corresponding period of 1987. Viewed separately, exports to the United States of unfilled granular PTFE, as a share of total unfilled granular PTFE exports, first * * * in 1986 to * * * percent, and then returned to their 1985 level in 1987. Their share by the end of interim 1988, however, at * * * percent, was almost * * * as that recorded at the beginning of the period.

The Japanese industry.--There are three known producers of granular PTFE in Japan: Daikin Industries, Ltd. ("Daikin"), Du Pont-Mitsui Fluorochemicals, Ltd. ("Du Pont-Mitsui"), and Asahi Fluoropolymers Co., Ltd. ("Asahi"). Daikin is the largest producer, with an estimated * * *-percent share of the Japanese market. Du Pont-Mitsui and Asahi are somewhat smaller, with each producer accounting for approximately * * * percent of the market. 1/

Daikin produces both filled and unfilled granular PTFE in its plants in Osaka and Kashima, Japan. * * *.

Du Pont-Mitsui is a joint venture between Du Pont and Mitsui Fluorochemicals Co., Ltd., of Tokyo, Japan, in which Du Pont owns a * * *-percent share. Du Pont-Mitsui is a subsidiary organized in Japan for the manufacture and sale of a variety of fluorinated products, which it produces in a plant in Shimizu City, Shizuoka Prefecture, Japan. The primary responsibility of this subsidiary, according to Du Pont, is to serve the Japanese, Chinese, and Korean markets. Thus, any exports to the United States are made exclusively to the parent company, Du Pont.

The third Japanese producer, Asahi, is a joint venture between Asahi Glass Co., Ltd., and Imperial Chemical Industries PLC of the United Kingdom (ICI-UK). ICI-UK owns a * * *-percent share in this joint venture. 2/ Asahi produces granular PTFE in a plant in Chiba, Japan. Available data on the Japanese industry, provided by counsels for Daikin and for Du Pont-Mitsui, are shown in table 21.

Japanese production of unfilled granular PTFE declined from 1985 to 1987; 3/ for granular PTFE as a whole, production fell * * * percent during the period. January-March 1988 figures, though, show a substantial increase in production over the comparable period in 1987; granular PTFE production increased * * * percent to * * * metric tons. Reported granular PTFE capacity first fell, to * * * metric tons in 1986, then rose to * * * metric tons in 1987. Capacity increased only slightly in the interim periods. Capacity utilization declined throughout 1985-87, with a particularly sharp drop in 1987, from * * * percent to * * * percent. 4/ Capacity utilization then increased during January-March 1988 to * * * percent from * * * percent during January-March 1987.

Home-market sales of granular PTFE declined from * * * metric tons in 1985 to * * * metric tons in 1987, a total decline of * * * percent. This trend reversed, however, in the interim periods, with home-market sales increasing * * * percent from * * * to * * * metric tons. Home-market sales totals for unfilled and filled granular PTFE, when viewed separately, displayed the same tendencies, although 1987 sales figures for the filled product were

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1/ Letter from counsel for Daikin Industries, Ltd., to the Commission, June 7, 1988.
2/ Conversation with counsel for ICI Americas, Inc., June 15, 1988.
3/ Data were provided on a fiscal year basis. Daikin Industries' fiscal year runs from December through November; for instance, FY 1985 data represent data for December 1984 through November 1985. Du Pont-Mitsui's fiscal year runs from April through March; data were recalculated to conform with the data from Daikin Industries.
4/ * * *.

Table 21
Granular PTFE: Japan's production, capacity, capacity utilization, home-market sales, end-of-period inventories, and export shipments, 1985-87, January-March 1987, and January-March 1988

* * * * * * *

barely changed from those of 1985. Exports to the United States of unfilled granular PTFE fluctuated unevenly during the period of investigation, first declining by * * * percent in 1986, then increasing by * * * percent in 1987, for an overall rise of * * * percent. 1/ Exports to the United States declined in the interim 1988 period, when compared with the corresponding period of 1987. As a share of production of unfilled granular PTFE, exports to the United States increased from * * * percent in 1985 to * * * percent in 1987. This share decreased in the interim periods, from * * * percent in January-March 1987 to * * * percent in the corresponding period of January-March 1988. The share of granular PTFE exports in production of all granular PTFE was somewhat lower than the above-mentioned ratio throughout the period; its movements, however, exhibited the same trends. As a share of total exports, shipments to the United States of the unfilled product constituted * * * percent in 1985, * * * percent in 1986, * * * percent in 1987, * * * percent in January-March 1987, and * * * percent in the corresponding period of 1988.

Consideration of the Causal Relationship Between the LTFV Imports and the Alleged Injury

U.S. imports

Imports of granular PTFE are provided for under TSUS item 445.54. Because this category contains items other than those subject to investigation, import data presented here are limited to those obtained from responses to Commission questionnaires. Reported imports of granular PTFE, filled and unfilled, from all sources, by quantity, value, and unit value, are presented in tables 22 to 24.

All granular PTFE.--Imports of granular PTFE from Italy * * * from * * * pounds in 1985 to * * * pounds in 1987, or by * * * percent (table 22). Such imports also * * * during January-March 1988, by * * * percent, compared with those in the corresponding period of 1987.

Imports from Japan of granular PTFE * * * increased during 1985-87, peaking at a level of * * * pounds in 1987, but declined in interim 1988 by one-third to * * * pounds from the interim 1987 level of * * * pounds. Combined imports from Italy and Japan exhibited the same increasing trend from 1985 to 1987, but declined in interim 1988 when compared with interim 1987, as * * *.

1/ Exports to the United States of filled granular PTFE were negligible during the period of investigation; accordingly, detailed discussion is limited to exports of the unfilled product.

Table 22
Granular PTFE: U.S. imports from Italy, Japan, and all other countries, 1985-87, January-March 1987, and January-March 1988

* * * * * * *

Unit values of imports from Italy showed a general * * * during 1985-87, * * * in 1986 at * * * per pound. The unit values of imports from Japan of all granular PTFE remained virtually constant during the period of investigation, but still consistently exceeded the unit values of imports from Italy throughout the period. The trend in unit values for combined imports from Italy and Japan of granular PTFE first decreased, then increased to a lesser extent between 1986 and 1987, for an overall decline of only * * * percent, before falling further in the 1988 interim period, by * * * percent, to * * * per pound from * * * per pound in the 1987 interim period.

Unfilled granular PTFE.--Imports of unfilled granular PTFE from Italy and Japan, when viewed separately, * * * during 1985-87, increasing * * * and * * * percent, respectively (table 23). Accordingly, the volume of combined imports from Italy and Japan of unfilled granular PTFE increased steadily from 2.2 million pounds in 1985 to 2.7 million pounds in 1987, which was a rise of 22 percent. January-March 1988 combined imports dropped, however, by 14 percent, to 742,000 pounds from their first quarter 1987 level of 866,000 pounds, as once again * * *.

Unit values of imports of unfilled granular PTFE from Italy * * * steadily throughout 1985-87; the unit value of imports from Japan did likewise, but to a lesser extent. Unit values of imports from Italy continued their * * * in the interim 1988 period when compared with interim 1987, whereas imports from Japan showed a slight * * * in unit value. Unit values of combined imports from Italy and Japan of unfilled granular PTFE generally declined during the period of investigation, but by only 3.3 percent between 1985 and 1987.

Table 23
Unfilled granular PTFE: U.S. imports from Italy, Japan, and all other countries, 1985-87, January-March 1987, and January-March 1988

Source	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	2,235	2,322	2,726	866	742
All other countries 1/	***	***	***	***	***
Total imports	***	***	***	***	***
	Value (1,000 dollars) 2/				
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	8,075	8,188	9,509	2,979	2,508
All other countries 1/	***	***	***	***	***
Total imports	***	***	***	***	***
	Unit value (per pound)				
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	$3.61	$3.53	$3.49	$3.44	$3.38
All other countries 1/	***	***	***	***	***
Average - all imports	***	***	***	***	***

1/ * * *.
2/ C.i.f. duty-paid value.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Filled granular PTFE.--Imports of filled granular PTFE from Italy and Japan more than doubled in 1985-87, rising to more than * * * pounds in 1987 (table 24). Unit values of imports from Italy fluctuated widely during 1985-87, but generally * * *. In January-March 1988, the unit value of imports from Italy of filled granular PTFE * * * slightly to * * * per pound, * * * percent * * * those in interim 1987. When viewed together, unit values of imports from Italy and Japan first * * * from 1985 to 1986, then * * * in 1987 to * * * per pound, a level * * * percent above that of 1985.

Table 24
Filled granular PTFE: U.S. imports from Italy, Japan, and all other countries, 1985-87, January-March 1987, and January-March 1988

* * * * * * *

Data on the quantity, value, and unit value of imports of the three grades of unfilled granular PTFE are shown in table 25. Data on the quantity, value, and unit value of imports of PTFE fine powder and dispersions, products not subject to these investigations, are shown in appendix E.

As a percentage of the volume of all imports of the unfilled product, fine-cut grade consistently held the largest share throughout the period of investigation, although its share dropped progressively during the period to a low of 44 percent in January-March 1988. Presintered grade registered the most rapid increase in import share, reaching 24 percent by the end of the interim 1988 period. With respect to relative unit values, fine-cut grade was the least expensive grade on a per-pound basis, whereas pelletized and presintered grades alternated throughout the period as the most expensive varieties of unfilled granular PTFE.

Table 25
Unfilled granular PTFE: U.S. imports, by grades, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
Pelletized:					
Quantity (1,000 pounds).....	863	884	1,314	363	310
Value (1,000 dollars).....	3,242	3,184	4,803	1,303	1,154
Unit value 1/.....	$3.76	$3.60	$3.66	$3.58	$3.72
Share of total unfilled granular imports by quantity (percent) 2/.....	30.3	29.5	35.6	33.0	32.1
Fine-cut:					
Quantity (1,000 pounds).....	1,520	1,525	1,611	554	425
Value (1,000 dollars).....	5,445	5,204	5,578	1,887	1,443
Unit value 1/.....	$3.58	$3.41	$3.46	$3.41	$3.40
Share of total unfilled granular imports by quantity (percent) 2/.....	53.4	51.0	43.7	50.4	44.0
Presintered:					
Quantity (1,000 pounds).....	404	456	640	161	229
Value (1,000 dollars).....	1,486	1,648	2,440	580	791
Unit value 1/.....	$3.68	$3.61	$3.81	$3.61	$3.46
Share of total unfilled granular imports by quantity (percent) 2/.....	14.2	15.2	17.3	14.6	23.7
Total unfilled granular PTFE:					
Quantity (1,000 pounds).....	***	***	***	***	***
Value (1,000 dollars).....	***	***	***	***	***
Unit value 1/.....	$3.64	$3.55	$3.64	$3.50	$3.52

1/ Calculated from unrounded data.
2/ * * *.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

U.S. market penetration by imports

All granular PTFE.--U.S. market penetration by shipments of imports (in terms of quantity) of granular PTFE increased from 27 percent in 1985 to 29 percent in 1987 (table 26). The ratio declined from 31 percent in January-March 1987 to 25 percent in the corresponding interim period of 1988. Combined shipments of imports from Italy and Japan increased their market share from * * * percent in 1985 to * * * percent in 1987, before falling from * * * percent during January-March 1987 to * * * percent in the corresponding period of 1988.

U.S. market penetration by combined shipments of imports from Italy and Japan, in terms of dollar value, remained relatively stable during 1985-87 at a level of * * * percent. The combined value-based market share of shipments of imports from Italy and Japan declined sharply from * * * percent during January-March 1987 to * * * percent in the corresponding period of 1988.

Unfilled granular PTFE.--In terms of quantity, U.S.-produced domestic shipments of unfilled granular PTFE as a share of apparent U.S. consumption declined from a level of 75 percent in 1985 to 71 percent in 1987 (table 27). During the same period, the combined U.S. market share of shipments of imports from Italy and Japan grew slowly but steadily from * * * percent of the market in 1985 to * * * percent in 1987. In the first quarter of 1987, the market share of shipments of imports from Italy and Japan stood at * * * percent; it dropped by nearly one third, to * * * percent, during the corresponding period of 1988.

When viewed in terms of value, movements in both individual and combined market shares of shipments of imports from Italy and Japan were similar to quantity-based trends. An examination of the 1985-87 data reveals small, but consistent, increases in market share of the combined imports, to a 1987 level of * * * percent. As with quantity, January-March 1987 saw the largest market penetration of shipments of imports from Italy and Japan; import penetration reached a level of * * * percent in that period, before declining to * * * percent in the corresponding period of 1988.

Filled granular PTFE.--As shown in table 28, combined imports from Italy and Japan of filled granular PTFE increased their penetration of the U.S. market, in terms of quantity, from * * * percent in 1985 to * * * percent in 1987. The increase in market share during this period, however, generally came at the expense of other foreign countries, as the market share of U.S. producers increased more markedly. Market penetration of imports from Italy and Japan declined slightly in the interim periods; however, the January-March 1988 market share was less than one-half that of the 1985 share.

Trends in relative market shares, when seen in terms of value, were similar to those based on quantity, except for the fact that the share of domestic producers exhibited a smaller increase during 1985-87. The share taken by importers increased slowly during 1985-87, then tapered off during the interim periods.

Table 26
Granular PTFE: U.S. producers' domestic shipments, shipments of imports from Italy, Japan, and all other countries, and apparent consumption, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
U.S. producers' shipments 1/...	8,010	9,406	9,761	2,332	3,222
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan 2/.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total.....	2,932	3,312	3,897	1,053	1,046
U.S. consumption 1/.....	10,942	12,718	13,658	3,385	4,268
	Share of consumption quantity (percent)				
U.S. producers' shipments.....	73.2	74.0	71.5	68.9	75.5
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan 2/.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total 3/.....	26.8	26.0	28.5	31.1	24.5
	Value (1,000 dollars) 4/				
U.S. producers' shipments 1/...	38,033	43,606	44,690	10,376	14,585
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total.....	11,892	13,531	15,411	4,468	4,464
U.S. consumption	49,925	57,137	60,101	14,844	19,049
	Share of consumption value (percent)				
U.S. producers' shipments.....	76.2	76.3	74.4	69.9	76.6
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan..	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total 3/.....	23.8	23.7	25.6	30.1	23.4

1/ * * *.
2/ 1987 shipments of imports from Japan include * * * pounds of Daikin's M-12 grade, * * * of which were sold for unique applications for which there is no domestic substitute. Daikin provided no information on the value of these shipments. See Daikin posthearing brief, app. 1, p. 1.
3/ Because of rounding, shares may not add to the totals shown.
4/ C.i.f. duty-paid value plus importers' markup.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 27
Unfilled granular PTFE: U.S. producers' domestic shipments, shipments of imports from Italy, Japan, and all other countries, and apparent consumption, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
U.S. producers' shipments	7,647	8,000	8,364	1,834	2,875
Shipments of imports from--					
Italy	***	***	***	***	***
Japan 1/	***	***	***	***	***
Italy and Japan	***	***	***	***	***
All other countries	***	***	***	***	***
Total	2,560	2,746	3,401	969	984
U.S. consumption	10,207	10,746	11,765	2,803	3,859
	Share of consumption quantity (percent)				
U.S. producers' shipments	74.9	74.4	71.1	65.4	74.5
Shipments of imports from--					
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	***	***	***	***	***
All other countries	***	***	***	***	***
Total	25.1	25.6	28.9	34.6	25.5
	Value (1,000 dollars) 2/				
U.S. producers' shipments	34,615	33,900	34,970	7,697	12,242
Shipments of imports from--					
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	***	***	***	***	***
All other countries	***	***	***	***	***
Total	10,514	11,663	13,068	4,087	4,183
U.S. consumption	45,129	45,563	48,038	11,784	16,425
	Share of consumption value (percent)				
U.S. producers' shipments	76.7	74.4	72.8	65.3	74.5
Shipments of imports from--					
Italy	***	***	***	***	***
Japan	***	***	***	***	***
Italy and Japan	***	***	***	***	***
All other countries	***	***	***	***	***
Total	23.3	25.6	27.2	34.7	25.5

1/ 1987 shipments of imports from Japan include * * * pounds of Daikin's M-12 grade, * * * of which were sold for unique applications for which there is no domestic substitute. Daikin provided no information on the value of these shipments. See Daikin posthearing brief, app. 1, p. 1.
2/ C.i.f. duty-paid value plus importers' markup.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 28
Filled granular PTFE: U.S. producers' domestic shipments, reported imports from Italy, Japan, and all other countries, and apparent consumption, 1985-87, January-March 1987, and January-March 1988

Item	1985	1986	1987	January-March-- 1987	1988
	Quantity (1,000 pounds)				
U.S. producers' shipments.....	1,940	3,220	3,658	1,016	1,113
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total.....	372	566	496	84	62
U.S. consumption.....	2,312	3,786	4,154	1,100	1,175
	Share of consumption quantity (percent)				
U.S. producers' shipments.....	83.9	85.1	88.1	92.4	94.7
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total 1/.....	16.1	14.9	11.9	7.6	5.3
	Value (1,000 dollars) 2/				
U.S. producers' shipments.....	10,405	17,358	19,194	4,832	5,489
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan.....	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total.....	1,378	1,868	2,343	381	281
U.S. consumption	11,783	19,226	21,537	5,213	5,770
	Share of consumption value (percent)				
U.S. producers' shipments.....	88.3	90.3	89.1	92.7	95.1
Shipments of imports from--					
Italy.....	***	***	***	***	***
Japan..	***	***	***	***	***
Italy and Japan.....	***	***	***	***	***
All other countries.....	***	***	***	***	***
Total 1/.....	11.7	9.7	10.9	7.3	4.9

1/ Because of rounding, shares may not add to the totals shown.
2/ C.i.f. duty-paid value.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Prices

Suppliers of granular PTFE quote prices by the pound on a delivered basis. Petitioner and respondents state that cost of the monomer, TFE, which is used in all types of granular PTFE, is a major determinant of granular PTFE prices. TFE accounts for * * * percent of Du Pont's cost of granular PTFE. 1/ Prices of granular PTFE vary to some extent depending on the processing technique for which they are designed. For example, on U.S. producers' price lists for unfilled resins, fine-cut grades are lower priced than pelletized grades, which, in turn, are lower priced than presintered grades. Transaction data received by the Commission, however, indicate that price variations among these unfilled grades are smaller than is suggested by list prices, particularly between the fine-cut and the pelletized grades. During the period under investigation, prices of virgin unfilled granular PTFE generally ranged from $3 to $5 per pound.

Granular PTFE prices also depend on the chemical purity and physical properties of the product sold. Certain processors of virgin granular PTFE prefer material that has been filled with another product, such as glass, carbon, or molybdenum to enhance the structural properties of the PTFE. 2/ The extra costs associated with the filling process generally make it a higher priced product, although filler used simply as an extender could result in a lower price than that for unfilled granular PTFE. 3/ In recent years, average prices of filled granular PTFE have reportedly been higher than average prices of unfilled material by approximately $1.20 to $1.75 per pound. 4/ Price data submitted by * * * for two common fine-cut filled products, 25-percent glass-filled and 25-percent carbon-filled granular PTFE, show price premiums for these types of filled PTFE of less than * * * per pound above * * * prices of the unfilled fine-cut resins used to make filled products. However, other filled resins are higher priced than these common filled products. For example, smaller percentages (5 percent) of glass, carbon, or molybdenum would be approximately 15 to 20 percent higher priced than the resins for which filled price data were collected. 5/ In addition, filled resins that are pelletized to produce "hi-flow" filled resins would also be approximately 20 percent higher priced than the specified filled resins. The Commission's data indicate that filled products constituted one-quarter of the total virgin granular PTFE market in 1985-87.

A small segment of the market for granular PTFE consists of scrap or reprocessed material. Reprocessed PTFE has impurities that reportedly reduce

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1/ Post-conference brief of Du Pont, Annex B, p. 2.
2/ The addition of even a small amount of filler, however, may cause a substantial reduction in unfilled granular PTFE's unique qualities, particularly dielectric strength (resistance to an electrical charge) and chemical stability. In certain applications, the reduced chemical and electrical properties of filled resins make them unsubstitutable for unfilled granular PTFE.
3/ See * * *'s questionnaire submission, Nov. 25, 1987, p. 38.
4/ Questionnaire submissions of Du Pont, ICI, Ausimont, Sumitomo, and Gunze from the preliminary investigations.
5/ According to * * *.

the product's special properties such as dielectric strength, and is therefore used in less demanding applications. Reprocessed PTFE is sold at a discount below the price of virgin material, and may compete with virgin granular PTFE based on price in a small segment of the market. Estimates of prices of reprocessed material range from $3.50 to $3.85 per pound. 1/

Sales practices.--As outlined earlier in this report, U.S. producers and importers of granular PTFE sell primarily to processors which transform the product and sell it to end users requiring granular PTFE's unique combination of chemical and physical properties. Supplier/purchaser negotiations are often characterized by long-term relationships, involving either contractual or informal agreements. * * *, * * *, and * * * reported that written contracts for multiple-shipment sales represented * * * percent of their 1986 sales. However, prices may be renegotiated prior to the expiration of these contracts. * * * reported that * * *. * * * reported that * * * percent of its sales of the imported Italian PTFE involved * * *.

Whereas Du Pont reported that prices were typically renegotiated * * *, Ausimont reported price negotiations generally occurring * * * for sales of Italian PTFE, and Sumitomo and Gunze reported * * * price negotiations as typical for sales of Japanese PTFE. Some suppliers publish price lists for sales of granular PTFE, but these are used mainly to announce general price changes or in negotiations with new customers. Negotiated prices are traditionally well below list prices.

As a result of suppliers' sales practices, transportation costs and leadtimes do not play an important role in the market for granular PTFE. U.S. inland transportation costs are absorbed by all domestic and foreign suppliers and represent a relatively small proportion of granular PTFE prices (generally 1 to 3 percent). Thus, whereas they may affect suppliers' netbacks, they are not a price-related factor in purchasers' source decisions. Because importers of Italian and Japanese granular PTFE maintain inventories in the United States, leadtimes are approximately 4 to 6 days for domestic and imported material. Thus, although leadtimes may have influenced some purchasing decisions in 1985-87, leadtimes were not a major factor in competition between U.S.-produced and imported PTFE during most of the period under investigation. When there is an industry supply disruption, such as the one in the early 1970's or the situation since the preliminary determinations in these investigations, leadtimes become more important. 2/

1/ Du Pont's post-conference brief, app. B, p. 7; notes from visit with * * *; and notes from visit with * * *.

2/ See the section of this report entitled "U.S. production, capacity, and capacity utilization" for further discussion of the impact of current capacity constraints on the industry producing granular PTFE.

Purchasing decisions. 1/--Processors' purchasing decisions for granular PTFE are affected by price and other market factors. Non-price factors affecting source decisions for granular PTFE include differences in processability or end-use characteristics of suppliers' resins, technical service, the long-run nature of customer/supplier relationships, trademarks, customer specifications, and costs incurred in switching suppliers. These factors make it more difficult to switch suppliers of granular PTFE and may, therefore, reduce the importance of price in source decisions. 2/ In addition, the fact that there is no substitute for granular PTFE in processors' operations is an important factor making total domestic demand for granular PTFE inelastic.

Processors' perceived differences in product quality and processability appear to be particularly important in processors' source decisions. 3/ Approximately 80 percent of processors cited quality, performance, or processability as their primary determinant in deciding between suppliers for any one order. 4/ Dielectric strength and contamination are examples of important quality characteristics; tensile elongation, particle size, and shrinkage are examples of important processability characteristics. Because granular PTFE is a difficult material to fabricate, processability characteristics are likely more important than they would be for other chemical products. Several processors have stated that any given producer's product might be better for one application, whereas another's product might be better

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1/ Purchaser questionnaire submissions from 21 firms, accounting for approximately 40 percent of apparent consumption of unfilled granular PTFE in 1987, were used for certain information in this section. Some of these firms also purchased filled resins in 1985-87 but for separate uses from those for unfilled resins. This information was supplemented with telephone conversations and meetings with numerous firms.

2/ For additional information on the substitutability of imported for domestic resins, see Office of Economics Memorandum EC-L-221, July 11, 1988.

3/ Quality generally refers to chemical purity (absence of water or other contaminants) and the quality of the end-use products with respect to such characteristics as dielectric strength. Processability refers to the match between a particular resin's characteristics (particle size and hardness, consistency, shrinkage) and a processor's equipment. Sometimes these terms are intermingled. While two purchasers would likely agree on the quality of a given batch of resin, they may very well disagree on ease of processing if their equipment and processes differ.

4/ Only 1 of 21 purchasers listed price as its primary purchasing determinant and roughly 80 percent reported having selected, on one or more occasions during the period under investigation, a supplier that was not the lowest priced supplier, suggesting that price differences are not large or that purchasers perceive price differences roughly equivalent to product differences. All but one purchaser listed price among its top three purchasing determinants, however.

for a second application. 1/ Almost one-half of purchasers reported that they cannot switch between suppliers of granular PTFE easily, and roughly 60 percent of purchasers reported that changing suppliers of granular PTFE generally requires adjustments in process or equipment. While adjustments are being made, some material may be wasted. In addition, new resins offered by familiar suppliers or by new suppliers must be qualified. Processors report that the qualification process takes anywhere from 2 days to 2 years; the average time reported was 4 months.

Although 89 percent of processors that purchased Italian granular PTFE stated that it is employed in the same range of uses as U.S.-produced granular PTFE, 53 percent reported that there is a significant physical or performance difference between the two sources. Opinions of these processors were evenly divided as to whether the Italian granular PTFE was superior to or inferior to domestic material. 2/ It is not too surprising that processors generally considered marketing practices similar for Italian and U.S.-produced granular PTFE since Ausimont purchased the former customer base of Allied.

Eighty-six percent of processors that purchased Japanese granular PTFE stated that it is employed in the same range of uses as U.S.-produced granular PTFE. However, roughly 70 percent reported that there is a significant physical or performance difference between the PTFE obtained from the two sources. Six of these processors specifically stated that one or more of the Japanese resins it purchases is superior to those produced in the United States. 3/ No general conclusions about differences in marketing of Japanese and U.S.-produced granular PTFE can be drawn from the questionnaire responses. 4/

Producer and importer price data.--For the purposes of analyzing price trends and price comparisons, the Commission requested producers and importers to provide price data separately by product and by country of origin, for the five common types of granular PTFE listed below:

1/ Processors that make more than one type of component or stock shape may prefer different suppliers for different applications (Meeting with * * *). For this reason, and for long-term supply considerations, all reporting processors of granular PTFE purchased from more than one supplier during the period of investigation.

2/ The reason for this difference of opinion may have to do with the fact that two processors could disagree about the processability of a particular resin if their processing equipment and end products differed.

3/ Daikin's M-12 grade is commonly mentioned as the best product for manufacturing skived tape (film). Also mentioned in the questionnaire responses as superior to U.S. resins were Daikin's M-15, M-24, M-30, M-31, and M-33 grades. Three purchasers cited various U.S. resins as better than Daikin material in their applications, however.

4/ For example, some processors complimented the Japanese sales force and others criticized the Japanese sales force.

PRODUCT 1: Pelletized grades of free-flowing granular PTFE resulting from the agglomeration and drying of a slurry of finely ground particles, not filled.

PRODUCT 2: Fine-cut grades of granular PTFE which are produced by grinding the stringy raw polymer to a particle size of less than 100 microns, not filled.

PRODUCT 3: Presintered grades of granular PTFE which are produced by heating granular PTFE to above the melting point and then regrinding it to impart particle flow properties, not filled.

PRODUCT 4: Granular PTFE resin, fine-cut grades, filled with 25-percent glass.

PRODUCT 5: Granular PTFE resin, fine-cut grades, filled with 25-percent carbon, or with a mixture of 25-percent carbon and graphite.

For sales during January 1985-March 1988, the Commission requested price and other transaction data for each reporting firm's largest sale (by pounds shipped) of each product in each quarter, and the quantity of their total shipments of these products to all customers in each quarter.

The Commission received price data from four U.S. producers of granular PTFE, accounting for approximately * * * percent of reported domestic shipments of all granular PTFE. Du Pont, accounting for * * * percent of reported domestic shipments of granular PTFE (filled and unfilled) in 1987, provided price data for sales of unfilled granular PTFE during January 1985-March 1988. Du Pont does not produce filled granular PTFE. ICI, accounting for * * * percent of reported domestic shipments in 1987, provided price data for sales of both filled and unfilled granular PTFE during January 1985-March 1988. 1/ Price data provided by Ausimont, a U.S. producer of filled and unfilled granular PTFE, is incomplete. Due to its 1986 acquisition of the Allied-Signal plant, Ausimont, accounting for * * * percent of reported domestic shipments in 1987, reported domestic price data for filled and unfilled granular PTFE only for the period July 1986-March 1988. 2/ Finally, Custom Compounding, a domestic producer of filled granular PTFE, provided price data as requested for the filled products. Custom Compounding accounted for * * * percent of reported domestic shipments in 1987.

1/ ICI reported in its May 23, 1988, questionnaire submission that * * *. Because ICI was not able to report price data for 1984 during the preliminary investigations and price data were requested for additional products in these final investigations, the analysis of prices in this report generally begins in 1985, although prices prior to 1985 are used for general price observations. For additional information on Du Pont's and importer's prices of unfilled granular PTFE in 1984, refer to the staff report in the preliminary investigations.
2/ Ausimont stated that it does not produce a granular PTFE resin that meets the Commission's product definition of pelletized granular PTFE in the United States.

The Commission received import price data from the sole importer of granular PTFE from Italy, Ausimont, and the two major importers of granular PTFE from Japan, Gunze and Sumitomo. In addition, a U.S. producer, ICI, provided price data for Japanese presintered granular PTFE that it originally reported as U.S.-produced presintered granular PTFE in the preliminary investigations. 1/

The five products chosen by the Commission for price analysis covered more than 80 percent of total domestic shipments and more than 80 percent of total import shipments from Italy and Japan of all types of granular PTFE in 1987. The fine-cut product category (Product 2) represents the largest portion of domestic shipments (54 percent of total domestic shipments and company transfers of all types of unfilled granular PTFE in 1987) and of import shipments from Italy (* * * percent) and Japan (* * * percent).

Domestic producers' price trends.--Delivered prices reported by U.S. producers for their largest quarterly sales of granular PTFE during January 1985-March 1988 are presented in tables 29 to 33 by producers and as a weighted average. 2/ Also shown in these tables are indexes of U.S. producers' weighted-average quarterly prices. These price data show U.S. producers' prices of unfilled granular PTFE products fluctuating during the period under investigation within a 10-percent range of prices in January-March 1985. Producers' prices of glass- and carbon-filled granular PTFE exhibited a wider range than that for prices of unfilled material. Despite these fluctuations, individual producer price series for the five granular PTFE products suggest a pattern of prices lower in 1986 than at the beginning of 1985 and some improvement in prices starting in 1987.

Table 29
Delivered prices reported by U.S. producers for their largest quarterly sales of U.S.-produced unfilled, pelletized grades of granular PTFE (Product 1), and producers' weighted-average prices, by quarters, January 1985-March 1988

* * * * * * *

1/ ICI reported that it * * *.
2/ U.S. producers' prices are presented separately because Ausimont's price series begin in the middle of the period under investigation. U.S. producers' prices are then weighted by the total quarterly shipments of the respective types of granular PTFE by each producer to derive a weighted-average price.

Table 30
Delivered prices reported by U.S. producers for their largest quarterly sales of U.S.-produced unfilled, fine-cut grades of granular PTFE (Product 2), and producers' weighted-average prices, by quarters, January 1985-March 1988

Period	Producers' prices			Weighted-average prices	
	Ausimont	Du Pont	ICI	Price	Index
	Per pound				
1985:					
January-March	***	***	***	***	***
April-June	***	***	***	***	***
July-September	***	***	***	***	***
October-December	***	***	***	***	***
1986:					
January-March	***	***	***	***	***
April-June	***	***	***	***	***
July-September	***	***	***	$4.08	***
October-December	***	***	***	3.97	***
1987:					
January-March	***	***	***	3.92	***
April-June	***	***	***	3.97	***
July-September	***	***	***	4.02	***
October-December	***	***	***	4.08	***
1988:					
January-March	***	***	***	4.09	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 31
Delivered prices reported by U.S. producers for their largest quarterly sales of U.S.-produced unfilled, presintered grades of granular PTFE (Product 3), and producers' weighted-average prices, by quarters, January 1985-March 1988

* * * * * * *

Table 32
Delivered prices reported by U.S. producers for their largest quarterly sales of glass-filled granular PTFE (Product 4), and producers' weighted-average prices, by quarters, January 1985-March 1988

Period	Producers' prices			Weighted-average prices	
	Ausimont	Custom Compounding	ICI	Price	Index
	Per pound				
1985:					
January-March.....	***	***	***	***	***
April-June.....	***	***	***	***	***
July-September.....	***	***	***	***	***
October-December....	***	***	***	***	***
1986:					
January-March.....	***	***	***	***	***
April-June.....	***	***	***	***	***
July-September.....	***	***	***	$4.25	***
October-December....	***	***	***	4.35	***
1987:					
January-March.....	***	***	***	4.83	***
April-June.....	***	***	***	4.04	***
July-September.....	***	***	***	3.68	***
October-December....	***	***	***	4.49	***
1988:					
January-March.....	***	***	***	4.57	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 33
Delivered prices reported by U.S. producers for their largest quarterly sales of carbon-filled granular PTFE (Product 5), and producers' weighted-average prices, by quarters, January 1985-March 1988

Period	Producers' prices			Weighted-average prices	
	Ausimont	Custom Compounding	ICI	Price	Index
	Per pound				
1985:					
January-March	***	***	***	***	***
April-June	***	***	***	***	***
July-September	***	***	***	***	***
October-December	***	***	***	***	***
1986:					
January-March	***	***	***	***	***
April-June	***	***	***	***	***
July-September	***	***	***	$4.40	***
October-December	***	***	***	4.42	***
1987:					
January-March	***	***	***	4.33	***
April-June	***	***	***	4.54	***
July-September	***	***	***	4.41	***
October-December	***	***	***	***	***
1988:					
January-March	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

With respect to unfilled granular PTFE, producers' weighted-average prices of the pelletized and fine-cut grades were approximately * * * and * * * percent lower, respectively, in January-March 1988 than in January-March 1985. 1/ In the presintered product category, producers' weighted-average prices declined * * * percent, largely as a result of * * *. 2/ Ausimont's quarterly prices of U.S.-produced fine-cut and presintered grades sold in July 1986-March 1988 * * *.

With respect to domestic filled resins, producers' weighted-average prices of the glass-filled granular PTFE (Product 4) showed overall price declines of * * * percent from January-March 1985 to January-March 1988, whereas weighted-average prices of the carbon-filled granular PTFE (Product 5) increased by * * * percent in this period.

Importers' price trends.--Importers' weighted-average prices of unfilled granular PTFE are shown in tables 34 to 36. Ausimont's quarterly prices of Italian filled granular PTFE are shown in tables 37 and 38. Imports of filled granular PTFE from Japan were virtually nil during the period of investigation.

From January-March 1985 to January-March 1988, prices of Italian granular PTFE * * * for * * * of five products. * * *. From January 1985 to March 1988, quarterly import prices of filled Italian granular PTFE * * * by * * * percent for the glass-filled product and * * * by * * * percent for the carbon-filled product.

The major importers of Japanese granular PTFE, Gunze and Sumitomo, provided price data for each of the unfilled granular PTFE products. 3/ ICI, a U.S. producer, also provided price data for imported Japanese presintered granular PTFE. 4/ Weighted-average prices (weighted by total quarterly shipments of the respective products to all customers) are used for analysis of Japanese import price trends and price comparisons. From January-March 1985 to January-March 1988, weighted-average prices of imported Japanese granular PTFE * * * for * * * of the three unfilled product categories. In this period, quarterly weighted-average prices of the pelletized and fine-cut granular grades * * * by * * * and * * * percent, respectively, whereas prices of the presintered grades fell by 6.2 percent. The full-period price trends for Japanese granular PTFE are affected by recent price increases * * *.

1/ Du Pont's prices of fine-cut granular PTFE in the first quarter of 1984 were * * *.

2/ * * *.

3/ Weighted-average Japanese import prices have changed slightly since the preliminary investigations because total quarterly shipment data (quantity and value) for the three unfilled granular PTFE products reported by Sumitomo have changed considerably from those reported in the preliminary investigations. Staff met with Sumitomo officials on June 28, 1988, to verify these changes. The new weighted-average price data are presented here.

4/ As noted above, these data were reported for U.S.-produced material in the preliminary investigations.

Table 34
Weighted-average delivered prices of U.S.-produced and imported Italian and Japanese unfilled, pelletized grades of granular PTFE (Product 1), based on prices reported by U.S. producers and importers for their largest quarterly sale, and average margins by which imports of this product undersold or (oversold) the U.S.-produced product, by quarters, January 1985-March 1988

* * * * * * *

Table 35
Weighted-average delivered prices of U.S.-produced and imported Italian and Japanese unfilled, fine-cut grades of granular PTFE (Product 2), based on prices reported by U.S. producers and importers for their largest quarterly sale, and average margins by which imports of this product undersold or (oversold) the U.S.-produced product, by quarters, January 1985-March 1988

* * * * * * *

Table 36
Weighted-average delivered prices of U.S.-produced and imported Italian and Japanese unfilled, presintered grades of granular PTFE (Product 3), based on prices reported by U.S. producers and importers for their largest quarterly sale, and average margins by which imports of this product undersold or (oversold) the U.S.-produced product, by quarters, January 1985-March 1988

Period	U.S. product	Italian product	Imports' margin of underselling/ (overselling)		Japanese product	Imports' margin of underselling/ (overselling)	
			Amount	Percent		Amount	Percent
	Per pound				Per pound		
1985:							
Jan.-Mar.	***	***	***	***	***	***	5.6
Apr.-June.	***	***	***	***	***	***	11.4
July-Sept.	***	***	***	***	***	***	7.2
Oct.-Dec..	***	***	***	***	***	***	13.2
1986:							
Jan.-Mar..	***	***	***	***	***	***	14.3
Apr.-June.	***	***	***	***	***	***	12.5
July-Sept.	***	***	***	***	***	***	3.2
Oct.-Dec..	***	***	***	***	***	***	8.3
1987:							
Jan.-Mar..	***	***	***	***	***	***	9.8
Apr.-June.	***	***	***	***	***	***	11.3
July-Sept.	***	***	***	***	***	***	16.8
Oct.-Dec..	***	***	***	***	***	***	12.9
1988:							
Jan.-Mar..	***	***	***	***	***	***	9.5

Note.--Absolute and percentage margins are calculated from unrounded figures. Thus, margins cannot always be directly calculated from the rounded prices shown in the table.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 37
Weighted-average delivered prices of U.S.-produced and imported Italian glass-filled granular PTFE (Product 4), based on prices reported by U.S. producers and importers for their largest quarterly sale, and average margins by which imports of this product undersold or (oversold) the U.S.-produced product, by quarters, January 1985-March 1988

* * * * * * *

Table 38
Weighted-average delivered prices of U.S.-produced and imported Italian carbon-filled granular PTFE (Product 5), based on prices reported by U.S. producers and importers for their largest quarterly sale, and average margins by which imports of this product undersold or (oversold) the U.S.-produced product, by quarters, January 1985-March 1988

* * * * * * *

Price comparisons.--Delivered price data reported for producers' and importers' largest quarterly sales during January 1985-March 1988 resulted in 78 direct quarterly price comparisons between weighted-average prices of U.S.-produced and imported Italian or Japanese unfilled granular PTFE. Those price comparisons, shown in tables 34-36, indicate that weighted-average prices of imported Italian or Japanese material were lower than weighted-average prices of U.S.-produced material in 60 of the 78 instances. Price comparisons for filled granular PTFE are discussed in the section on Italy (tables 37 and 38). 1/

Instances of underselling by importers of unfilled granular PTFE were the fewest in the pelletized product category, where importers' weighted-average prices were higher than those for U.S.-produced PTFE in 15 of 26 instances. Margins of underselling were generally less than 10 percent for the pelletized and fine-cut grades. The highest margins of underselling occurred in the presintered grades, although margins were not consistently high in this category. Because Ausimont began reporting domestic prices in 1986, it is difficult to analyze trends in relative prices of U.S.-produced and imported PTFE. Price comparisons by country of origin are discussed separately below.

Italy.--Weighted-average prices of Italian unfilled granular PTFE were lower than those of U.S. producers in 27 of 39 direct quarterly price comparisons. For pelletized grades, imported Italian material was lower priced than U.S.-produced material in only 3 of 13 comparisons. In these instances, the Italian importer's prices were lower than those of U.S. producers by * * * to * * * per pound, or by * * * to * * * percent. In 10 quarters, imported Italian pelletized grades were higher priced than the domestic product by * * * to * * * percent. Price comparisons for the fine-cut grades show the importer's prices lower than those of domestic producers in 12 of 13 quarters, by * * * to * * * per pound, or * * * to * * * percent of U.S. producers' prices. Finally, margins of underselling ranged from * * * to * * * per pound for the presintered category, in which Italian prices were lower than domestic prices in all but one instance by percentage margins of * * * to * * * percent. Since the beginning of 1987, Italian presintered granular PTFE has * * * the domestic product by * * * percent of producers' weighted-average prices.

1/ Filled resins are not generally imported from Japan.

Prices of Italian filled granular PTFE were lower than weighted-average domestic prices in 20 of 26 instances. Ausimont undersold U.S. producers on sales of filled resins by average margins ranging from * * * to * * * percent for glass-filled material and from * * * to * * * percent for carbon-filled material.

Japan.--Weighted-average prices of Japanese unfilled granular PTFE were lower than weighted-average prices of U.S. producers in 33 of 39 direct quarterly comparisons. Similar to price comparisons for Italy, the pelletized product category showed the fewest instances of underselling by importers of Japanese PTFE. Imported Japanese pelletized grades were lower priced than those of U.S. producers in 8 of 13 instances by margins of * * * to * * * per pound, or by * * * to * * * percent below producers' prices. In all but 1 of the 13 price comparisons for the fine-cut product category, Japanese material was lower priced than that produced in the United States, by margins ranging from * * * to * * * per pound, or by * * * to * * * percent below producers' prices. For the presintered product category, importers undersold U.S. producers on a weighted-average price basis in all 13 instances, by * * * to * * * per pound, or by 3.2 to 16.8 percent of U.S. producers' prices.

Purchasers' price data.--Processors of granular PTFE provided price data allowing purchase-price comparisons. In contrast to price comparisons provided by producers' and importers' sales data, processors' purchase data did not show a consistent pattern of underselling by imports subject to these investigations.

The Commission asked purchasers of granular PTFE to report delivered prices paid for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE in January 1986-March 1988. These prices were collected for the two unfilled product types accounting for the majority of consumption, pelletized (Product 1) and fine-cut (Product 2) grades, and for filled glass resin (Product 4). Purchasers that do not purchase the specified granular PTFE products were asked to report for their closest products. 1/ The questionnaire also directed purchasers to describe any significant differences in product characteristics or purchase terms that should be considered in making price comparisons by source country.

The Commission received purchaser price data from 24 firms that accounted for 57 percent, by quantity, of apparent U.S. consumption of unfilled granular PTFE in 1987. 2/ With the exception of * * *, all of these firms are processors of granular PTFE. 3/ Price comparisons for filled granular resins

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1/ For example, one processor reported price data for presintered unfilled granular PTFE (Product 3).
2/ Seventeen firms, accounting for 48 percent of apparent U.S. consumption of unfilled granular PTFE in 1987, provided usable price comparisons involving either imported Italian or imported Japanese granular PTFE. Data from 7 firms resulted in no price comparisons because these firms purchased from only one source at a time for any given product. Four firms that returned the purchaser's questionnaire did not complete the price section.
3/ Some industry representatives consider filled resin producers to be processors.

are too few to be meaningful. 1/ Processors' price data resulted in 76 direct quarterly comparisons between the price paid by a particular purchaser for U.S.-produced unfilled granular PTFE and the price paid for Italian unfilled granular PTFE and 54 such comparisons involving imported Japanese unfilled granular PTFE, or 130 comparisons in total. 2/ These processor price comparisons are shown in table 39. Because some of these price comparisons may be influenced by differences in purchase quantities, the quantities purchased are also presented in the table.

Processors' price data did not show a consistent pattern of underselling by imports of Italian and Japanese material. 3/ In only about one-third of the direct processor comparisons was imported material lower priced than domestic material. The remainder of price comparisons showed imported material selling at prices above, or at least equal to, domestic prices. Similar to producer/importer price comparisons, margins of underselling reported by processors were generally small (typically less than 5 percent).

In the majority of the direct quarterly comparisons reported by processors, imported Italian unfilled granular PTFE did not undersell U.S.-produced material. Italian unfilled granular PTFE was higher priced than U.S.-produced material in 33 of 76 instances, lower priced in 30 instances, and priced identically in 13 instances. 4/ Median margins of underselling in the 30 instances were * * * percent for pelletized grades and * * * percent for fine-cut grades. These relatively high margins support the pattern of greater underselling by importers on the higher value presintered grades of unfilled granular PTFE that was observed for producer/importer data.

Similarly, processors' data did not show consistent underselling by imports of Japanese granular PTFE. Japanese granular PTFE was higher priced than U.S.-produced material in 22 of 54 instances, lower priced in 18 instances and priced identically in 14 instances. Median margins of underselling in the

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1/ Some processors reported prices of domestic and imported Italian filled resins, but said that they were different composites and thus not comparable.
2/ Not included in this total are two price comparisons reported by * * *, which reported * * *.
3/ Producers' and importers' data begin in 1985; processors' data begin in 1986. Thus, a greater share of processors' data involve 1987 when importers' prices were increasing. This difference in periods covered is one possible explanation for the different underselling results.
4/ * * * reported purchasing Italian pelletized material at prices consistently at least * * * percent higher than those it was paying for U.S.-produced pelletized grades in each quarter in January 1986-March 1988.
Producer/importer price data also resulted in consistent overselling by the importer of Italian pelletized material. The quantities of Italian pelletized material purchased by * * * are also consistently smaller than those purchased from the domestic producer, however.

18 instances were * * * percent for pelletized grades, * * * percent for fine-cut grades, and * * * percent for presintered material. 1/ One purchaser, * * *, commented that prices of domestic and imported Japanese material are not perfectly comparable because it needs the Daikin fine-cut M-12 grade. However, this processor * * *.

1/ One processor, * * *, reported purchasing Japanese presintered material at a price * * * percent lower than that of comparable domestic material in the last quarter of 1986 and the first two quarters of 1987. These relatively high margins support the pattern of greater underselling by importers on the higher-value presintered grades of unfilled granular PTFE that was observed for producer/importer data.

Table 39
Unfilled granular PTFE: Delivered prices and quantities reported by processors for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE, and margins by which imported Italian and Japanese granular PTFE undersold or (oversold) the U.S. product, by reporting processors, and products, January 1986-March 1988

Purchaser	Type of unfilled granular PTFE	Period Year	Quarter	U.S. product Quantity (Pounds)	U.S. product Price (Per pound)	Italian product Quantity (Pounds)	Italian product Price (Per pound)	Japan product Quantity (Pounds)	Japan product Price (Per pound)	Italian product's margin of underselling/ (overselling) Amount	Italian product's margin of underselling/ (overselling) Percent of price	Japanese product's margin of underselling/ (overselling) Amount	Japanese product's margin of underselling/ (overselling) Percent of price
* * *	Pelletized	1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***

See footnotes at end of table.

Table 39—Continued
Unfilled granular PTFE: Delivered prices and quantities reported by processors for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE, and margins by which imported Italian and Japanese granular PTFE undersold or (oversold) the U.S. product, by reporting processors, and products, January 1986-March 1988

Purchaser	Type of unfilled granular PTFE	Period		U.S. product		Italian product		Japan product		Italian product's margin of underselling/ (overselling)		Japanese product's margin of underselling/ (overselling)	
		Year	Quarter	Quantity	Price	Quantity	Price	Quantity	Price	Amount	Percent of price	Amount	Percent of price
				Pounds	Per pound	Pounds	Per pound	Pounds	Per pound				
* * *	Pelletized	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
* * *	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***

See footnotes at end of table.

Table 39—Continued

Unfilled granular PTFE: Delivered prices and quantities reported by processors for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE, and margins by which imported Italian and Japanese granular PTFE undersold or (oversold) the U.S. product, by reporting processors, and products, January 1986-March 1988

Purchaser	Type of unfilled granular PTFE	Period		U.S. product		Italian product		Japan product		Italian product's margin of underselling/ (overselling)		Japanese product's margin of underselling/ (overselling)	
		Year	Quarter	Quantity (Pounds)	Price (Per pound)	Quantity (Pounds)	Price (Per pound)	Quantity (Pounds)	Price (Per pound)	Amount	Percent of price	Amount	Percent of price
* * *	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
* * *	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	2	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***

See footnotes at end of table.

Table 39—Continued
Unfilled granular PTFE: Delivered prices and quantities reported by processors for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE, and margins by which imported Italian and Japanese granular PTFE undersold or (oversold) the U.S. product, by reporting processors, and products, January 1986-March 1988

Purchaser	Type of unfilled granular PTFE	Period		U.S. product		Italian product		Japan product		Italian product's margin of underselling/ (overselling)		Japanese product's margin of underselling/ (overselling)	
		Year	Quarter	Quantity	Price	Quantity	Price	Quantity	Price	Amount	Percent of price	Amount	Percent of price
				Pounds	Per pound	Pounds	Per pound	Pounds	Per pound				
* * *	Pelletized	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	4	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	1	***	***	***	***	***	***	***	***	***	***
		1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1986	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	2	***	***	***	***	***	***	***	***	***	***
		1986	3	***	***	***	***	***	***	***	***	***	***
		1987	1	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Presintered	1986	4	***	***	***	***	***	***	***	***	***	11.2
		1987	1	***	***	***	***	***	***	***	***	***	11.2
		1987	2	***	***	***	***	***	***	***	***	***	11.2

See footnotes at end of table.

Table 39—Continued

Unfilled granular PTFE: Delivered prices and quantities reported by processors for their largest quarterly purchases of U.S.-produced, Italian, and Japanese granular PTFE, and margins by which imported Italian and Japanese granular PTFE undersold or (oversold) the U.S. product, by reporting processors, and products, January 1986-March 1988

Purchaser	Type of unfilled granular PTFE	Period		U.S. product		Italian product		Japan product		Italian product's margin of underselling/ (overselling)		Japanese product's margin of underselling/ (overselling)	
		Year	Quarter	Quantity	Price	Quantity	Price	Quantity	Price	Amount	Percent of price	Amount	Percent of price
				Pounds	Per pound	Pounds	Per pound	Pounds	Per pound				
* * *	Pelletized	1987	1	***	***	***	***	***	***	***	***	***	***
		1987	2	***	***	***	***	***	***	***	***	***	***
		1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1987	3	***	***	***	***	***	***	***	***	***	***
		1987	4	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Fine-cut	1988	1	***	***	***	***	***	***	***	***	***	***
* * *	Pelletized	1986	3	***	***	***	***	***	***	***	***	***	***
	Fine-cut	1987	3	***	***	***	***	***	***	***	***	***	***
		1988	1	***	***	***	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Exchange rates

Changes in exchange rates and in aggregate price levels can affect the relative prices of foreign to U.S.-produced goods. These factors are examined below for Italy and Japan. Table 40 presents nominal and real exchange-rate equivalents of the Italian lira and the Japanese yen in U.S. dollars, and producer price indicators for each country on an annual basis for 1981-87 and on a quarterly basis for January 1985-March 1988. 1/

The annual data show that nominal values of the lira and yen experienced two major exchange rate movements in 1981-87, first depreciating vis-a-vis the dollar in 1981-85 and then increasing in 1985-87. In 1987, the average nominal value of the lira vis-a-vis the dollar was 12 percent below its relative value in 1981, whereas the value of the yen vis-a-vis the dollar was 53 percent above its relative 1981 level. Quarterly data for the period corresponding to the price data discussed above indicate that nominal values of the Italian lira and the Japanese yen appreciated vis-a-vis the U.S. dollar during the period under investigation. Relative to the dollar, the lira and the yen appreciated by 64 percent and 101 percent, respectively, from January-March 1985 to January-March 1988. Adjusted for relative movements in producer price indices, the real values of the Italian lira and Japanese yen rose by 72 percent and 68 percent against the dollar during January 1985-March 1988.

Lost sales and lost revenues

In the preliminary investigations, the Commission received allegations of lost sales and lost revenues because of price competition from imported Italian and Japanese granular PTFE from * * *. For the final investigations, * * * repeated or referenced these allegations. 2/ * * *. 3/

* * * named * * * customers in * * * instances of sales lost to lower priced imports of granular PTFE from Japan or Italy. Alleged lost sales of domestic producers during January 1985-March 1988 totaled * * * valued at around * * *. These producers also named * * * customers in * * * allegations of revenues lost making price reductions to compete with imported Italian or Japanese material. Alleged lost revenues of domestic producers in January 1985-March 1988 totaled approximately * * * on sales of * * *. Whereas * * *, * * *.

1/ Data are reported by the International Monetary Fund in International Financial Statistics. An increase in the exchange-rate index since the base period suggests that it takes more dollars to purchase the same amount of foreign currency.

2/ * * * did not repeat allegations concerning sales and revenues lost in 1984. * * *.

3/ * * *, however, did submit some information concerning three customers to which it believed it lost sales to * * * since 1985.

Table 40
Nominal exchange-rate equivalents of the Italian lira and the Japanese yen in U.S. dollars, real exchange-rate equivalents, 1/ and producer price indicators in Italy, Japan, and the United States, 2/ indexed by years, 1981-87, and by quarters, January 1985-March 1988

Period	U.S. Producer price Index	Italy			Japan		
		Producer price index	Nominal-exchange-rate index	Real-exchange-rate index 3/	Producer price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/
		--US dollars/lira--			--US dollars/yen--		
1981 4/....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1982.....	102.0	113.9	84.1	93.8	101.8	88.5	88.3
1983.....	103.3	125.0	74.8	90.5	99.5	92.9	89.4
1984.....	105.8	137.9	64.7	84.4	99.3	92.9	87.2
1985.....	105.3	148.0	59.5	83.7	98.1	92.5	86.1
1986.....	102.2	146.8	76.3	109.5	89.2	130.9	114.2
1987.....	104.9	150.7	87.7	125.9	86.7	152.5	125.9
1985:							
Jan.-Mar 5/	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June..	100.1	102.2	102.5	104.7	98.8	102.8	101.5
July-Sept..	99.4	102.1	106.6	109.5	97.5	108.0	106.0
Oct.-Dec...	100.0	103.0	115.5	119.0	94.7	124.4	117.8
1986:							
Jan.-Mar...	98.5	102.5	126.5	131.6	92.8	137.2	129.2
Apr.-June..	96.6	100.7	131.3	136.9	89.4	151.5	140.1
July-Sept..	96.2	99.9	140.8	146.2	87.0	165.4	149.7
Oct.-Dec...	96.5	100.6	145.4	151.5	86.1	160.8	143.5
1987:							
Jan.-Mar...	97.7	102.1	154.7	161.8	85.6	168.2	147.4
Apr.-June..	99.2	103.1	155.5	161.6	84.9	180.6	154.5
July-Sept..	100.3	103.9	152.0	157.4	86.0	175.4	150.2
Oct.-Dec...	100.8	105.2	161.9	169.0	89.2	189.7	167.9
1988:							
Jan.-Mar...	101.2	6/106.2	163.6	6/ 171.7	84.7	201.3	168.4

1/ Exchange rates expressed in U.S. dollars per unit of foreign currency.
2/ Producer price indicators--intended to measure final product prices--are based on average quarterly indices presented in line 63 of the International Financial Statistics.
3/ The indexed real exchange rate represents the nominal exchange rate adjusted for relative movements in producer price indices in the United States and the respective foreign country. Producer prices in the United States increased 1.2 percent between January 1985 and March 1988 compared with an increase of 6.2 percent in Italy and a decrease of 15 percent in Japan.
4/ 1981=100.
5/ Jan.-Mar 1985=100.
6/ Data are derived from Italian producer price indices reported for January-February only.

Source: International Monetary Fund, International Financial Statistics, June 1988 (quarterly data) and May 1988 (annual data).

For this final report, Commission staff was able to investigate three lost revenue allegations, involving two purchasers. Their responses to these allegations appear below.

Purchaser 1.--* * * named * * * in an allegation of lost revenues that totaled almost * * *. The allegation concerned a * * *-percent price reduction * * * made to compete with Italian material for a large sale in * * *. * * * stated in its allegation that the sales quantity was * * *.

According to * * *, a company spokesman, * * * is a processor of * * *. * * * could not recall the purchasing situation in * * *, but he stated that * * * purchased very little Italian granular PTFE during the period of investigation and never purchases over * * * pounds in one order from any supplier. 1/ However, the spokesman confirmed that * * * have reduced prices to * * * in * * * by as much as * * * per pound, or roughly * * * percent, to compete with lower priced Japanese granular PTFE. The purchaser added that Japanese granular PTFE was not always lower priced than U.S.-produced material in * * *.

* * * routinely purchases from more than one supplier at a time because it prefers particular suppliers' granular PTFE for particular applications and tooling equipment. * * *'s major supplier is * * *, but the firm also purchases from * * *. This processor used to purchase from * * *, but stopped due to quality problems with * * *'s material. Price is an important consideration for certain applications. For molding * * *, a price difference of $0.10-$0.15 per pound would determine the supplier. The spokesman stated that the quality of Japanese granular PTFE is good.

There generally has not been much variation in price between the granular PTFE suppliers. For example, * * *'s June 1988 purchase prices of fine-cut granular PTFE are * * * for U.S.-produced material (* * *), and approximately * * * for imported Japanese material (* * *). These prices are a little higher than those in late 1987 (approximately * * * per pound). * * *'s price has declined for the fine-cut grade since 1985, when it was * * * per pound.

Purchaser 2.--* * * was cited by * * * in * * * lost revenue allegations concerning price competition in * * *. The * * * allegation concerned a * * *-percent price reduction * * * made to compete with lower-priced Japanese material for a sale of * * * pounds of * * * granular PTFE. The * * * instance concerned * * *'s allegation that it had to reduce its total price quote for * * * granular PTFE by * * * percent to compete with lower-priced Italian and Japanese material for a sale of * * * pounds.

* * * is a processor of * * *. * * * of * * * could not verify the particular * * * allegations but stated that his firm has received price concessions from * * * as a result of lower priced Japanese fine-cut granular

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1/ * * *'s average purchase is * * * pounds.

PTFE and that these quite possibly occurred in the * * *. 1/ In * * *'s opinion, suppliers of imported granular PTFE have contributed to the downward price trend since 1982. 2/

* * * purchases from all the major suppliers (* * *). More than one source is used at any one time to obtain better pricing and security of supply, and also because there are slight differences in suppliers' granular PTFE resins that may favor one supplier for a particular application. * * *'s major purchasing determinants are, in order, quality, price, and availability. Within the last 3 years, prices of various suppliers have been fairly close. The purchaser stated that they would not generally be willing to pay a price premium of more than * * * per pound for any supplier's material.

Responses from 5 purchasers to 10 lost sale and lost revenue allegations investigated in the preliminary investigations are included below.

Purchaser 3.--* * * was cited by * * * in two lost sales allegations that totaled * * *. * * * claimed that these sales were lost to competition from lower priced Italian and Japanese PTFE in * * *. * * *, a spokesman for * * *, could not confirm these allegations but stated that although price is a consideration, it is not the most important determinant. * * * stated that * * *'s purchasing decision is often based on the use of the granular PTFE. According to * * *, PTFE from some suppliers works better in some applications than others and * * * will purchase the PTFE that is best in that particular application. * * * added that * * * purchases granular PTFE that is produced in * * *. * * * commented that the quality and price of PTFE from these * * * countries have been comparable during the past 3 years. In addition to price and quality, technical service is also considered when choosing a supplier.

Purchaser 4.--* * * named * * * in * * * lost revenue allegations that totaled * * *. According to * * *, lower priced granular PTFE offered by Italian and Japanese suppliers in * * * forced * * * to reduce its prices to * * *. * * *, a spokesman for * * *, confirmed that prices of domestic PTFE were reduced in these periods. He stated that these price reductions were necessary so that * * * could offer competitively-priced products. * * * stated that at least * * * percent of the granular PTFE that * * * purchases is supplied by domestic producers, with approximately * * * percent being purchased from * * *. * * * stated that price and delivery are very important in the firm's purchasing decisions.

In addition to the * * * allegations described above, * * * named * * * in a lost sale allegation involving * * * pounds of imported Italian granular PTFE allegedly purchased in * * * because it was * * * per pound lower priced than

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1/ * * * reports that its purchase quantities are not as large as those alleged by * * *. Typical purchase quantities range from * * * to * * * pounds. No single order would be more than * * * pounds, and * * * does not purchase granular PTFE * * *. Price negotiations occur throughout the year with price concessions characterized by * * * as affecting * * *'s price quotes over time rather than being specific reductions in initial price quotes.
2/ The spokesman could not discern a clear price trend from 1985 to date.

* * *'s offer of * * * per pound. * * * denied this allegation, stating that it has never purchased that much imported PTFE in any order.

Purchaser 5.--* * * named * * * in a lost revenue allegation totaling * * * and a lost sale allegation totaling * * *. The lost revenue allegation involved price reductions to compete with lower priced Italian PTFE in * * *. The lost sale allegation involved Italian or Japanese PTFE believed to be purchased in * * *. A spokesman for * * * could not recall the circumstances alleged by * * * but stated that * * * purchases mainly from * * *. In addition, a small amount of granular PTFE is purchased from * * *. This spokesman stated that price is the main determinant; however, some customers require that the PTFE be purchased from a specific producer, usually * * *, and * * * will therefore purchase from that supplier. This representative commented that technical advice from the supplier is also a purchasing consideration and that * * * has had difficulties receiving assistance from * * * in the past.

Purchaser 6.--* * * named * * * in a lost revenue allegation involving price competition from imported Italian material on * * * pounds of * * * granular PTFE purchased in * * *. * * * alleged that it reduced its price from * * * per pound to * * * per pound to match the price of Italian granular PTFE.

* * *'s spokesman, * * *, denied * * *'s allegation and stated that * * * would never purchase * * * pounds (a * * * supply) in one order. Further, he stated that no suppliers were charging anywhere near * * * per pound in that period, and suggested that the price may have been from a price list. * * *, a manufacturer of * * *, purchases granular PTFE from * * * suppliers such as * * *, and also purchases * * *. In * * *, U.S.-produced and imported PTFE were competitively priced at around * * * per pound, with the sole exception of * * *, whose prices were slightly higher. This company is generally not willing to pay a premium for any supplier's material because its own customers are very cost conscious. The spokesman said that it cannot recall aggressive price leadership by domestic or foreign firms in recent years. Price reductions to meet competitive offers have been about * * * per pound. The purchaser reported that it is still purchasing from * * *.

The company's major purchasing determinants are price and delivery. There are no available substitutes for the granular PTFE used in * * *'s operations. The spokesman reported that it always purchases granular PTFE from several suppliers at a time to avoid supply disruptions like the "supply crunch" in 1974.

Purchaser 7.--* * * was cited in * * * lost revenue allegations regarding price reductions to meet prices of imported Italian granular PTFE. * * * alleged that, in * * *, it reduced its prices to * * * from * * * per pound to * * * per pound on * * * pounds of * * * material, and from * * * per pound to * * * per pound on * * * pounds of * * * material.

* * * operates a wide range of processing operations that produce PTFE products, including * * *. * * * could not confirm * * *'s allegations. The company purchases more than * * * percent of its granular PTFE from * * *, including * * *. * * * purchases * * * PTFE, but * * * denied actively soliciting price reductions due to offers from foreign suppliers. * * *'s

policy is * * *, but to consider good offers that suppliers may make in routine sales calls 3 to 4 times per year to announce price changes or new product developments. The spokesman recalls paying approximately * * * per pound for granular PTFE from all suppliers in * * *, and * * *. The spokesman reported having paid higher prices for imported Italian or Japanese material in instances where a particular grade of PTFE from a foreign supplier is ideally suited for a certain application.

The spokesman recalled that U.S.-produced and imported granular PTFE have been comparably priced near * * * per pound for several years. The spokesman acknowledged that announced price increases in recent years have not been maintained but has heard that new price increases from several suppliers will take effect in 1988.

The spokesman stated that the firm's major purchasing determinant is quality, not price, citing tensile elongation and dielectric properties as important quality characteristics. The purchaser said that quality problems with U.S.-produced or imported material are rare, but recalled a serious production problem * * *. As a result of this experience, it has reduced purchases from * * *.

APPENDIX A

NOTICE OF THE COMMISSION'S INSTITUTION OF FINAL ANTIDUMPING INVESTIGATIONS

[Investigations Nos. 731-TA-385 and 386 (Final)]

Granular Polytetrafluoroethylene Resin From Italy and Japan

AGENCY: United States International Trade Commission.

ACTION: Institution of final antidumping investigations and scheduling of a hearing to be held in connection with the investigations.

SUMMARY: The Commission hereby gives notice of the institution of final antidumping investigations Nos. 731-TA-385 and 386 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Italy and Japan of granular polytetrafluoroethylene resin (hereafter granular PTFE),[1] whether filled or unfilled, provided for in item 445.54 of the Tariff Schedules of the United States, that have been found by the Department of Commerce, in preliminary determinations, to be sold in the United States at less than fair value (LTFV). Unless the investigations are extended, Commerce will make its final LTFV determinations on or before June 28, 1988, and the Commission will make its final injury determinations by August 16, 1988 (see sections 735(a) and 735(b) of the act (19 U.S.C. 1673d(a) and 1673(b))).

For further information concerning the conduct of these investigations, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, Part 207, Subparts A and C (19 CFR Part 207), and Part 201, Subparts A through E (19 CFR Part 201).

EFFECTIVE DATE: April 19, 1988.

FOR FURTHER INFORMATION CONTACT: Jonathan Seiger (202-252-1177), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-252-1809. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-252-1000.

SUPPLEMENTARY INFORMATION:

Background. These investigations are being instituted as a result of affirmative preliminary determinations by the Department of Commerce that imports of granular PTFE from Italy and Japan are being sold in the United States at LTFV within the meaning of section 731 of the Act (19 U.S.C. 1673). The investigations were requested in a petition filed on November 6, 1987, by E.I. DuPont de Nemours & Company, Inc., Wilmington, Delaware.

In response to that petition the Commission conducted preliminary antidumping investigations and, on the basis of information developed during the course of those investigations, determined that there was a reasonable indication that an industry in the United States was materially injured by reason of imports of the subject merchandise (52 FR 49209, December 30, 1987).

Participation in the investigations. Persons wishing to participate in these investigations as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules (19 CFR 201.11), not later than twenty-one (21) days after the publication of this notice in the Federal Register. Any entry of appearance filed after this date will be referred to the Chairman, who will determine whether to accept the late entry for good cause shown by the person desiring to file the entry.

Service list. Pursuant to § 201.11(d) of the Commission's rules (19 CFR 201.11(d)), the Secretary will prepare a service list containing the names and addresses of all persons, or their representatives, who are parties to these investigations upon the expiration of the period for filing entries of appearance. In accordance with §§ 201.16(c) and 207.3 of the rules (19 CFR 201.16(c) and

[1] Imports of PTFE fine powders and PTFE aqueous dispersions are not covered by these investigations.

207.3), each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by the service list), and a certificate of service must accompany the document. The Secretary will not accept a document for filing without a certificate of service.

Staff report. A public version of the prehearing staff report in these investigations will be placed in the public record on June 27, 1988, pursuant to § 207.21 of the Commission's rules (19 CFR 207.21).

Hearing. The Commission will hold a hearing in connection with these investigations beginning at 9:30 a.m. on July 13, 1988, at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission not later than the close of business (5:15 p.m.) on July 1, 1988. All persons desiring to appear at the hearing and make oral presentations should file prehearing briefs and attend a prehearing conference to be held at 9:30 a.m. on July 6, 1988, in the Main Hearing Room of the U.S. International Trade Commission Building. The deadline for filing prehearing briefs is July 7, 1988.

Testimony at the public hearing is governed by § 207.23 of the Commission's rules (19 CFR 207.23). This rule requires that testimony be limited to a nonconfidential summary and analysis of material contained in prehearing briefs and to information not available at the time the prehearing brief was submitted. Any written materials submitted at the hearing must be filed in accordance with the procedures described below and any confidential materials must be submitted at least three (3) working days prior to the hearing (see § 201.6(b)(2) of the Commission's rules (19 CFR 201.6(b)(2))).

Written submissions. All legal arguments, economic analyses, and factual materials relevant to the public hearing should be included in prehearing briefs in accordance with § 207.22 of the Commission's rules (19 CFR 207.22). Posthearing briefs must conform with the provisions of § 207.24 (19 CFR 207.24) and must be submitted not later than the close of business on July 20, 1988. In addition, any person who has not entered an appearance as a party to the investigations may submit a written statement of information pertinent to the subject of the investigations on or before July 20, 1988.

A signed original and fourteen (14) copies of each submission must be filed with the Secretary to the Commission in accordance with § 201.8 of the Commission's rules (19 CFR 201.8). All written submissions except for confidential business data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any business information for which confidential treatment is desired must be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Confidential Business Information." Confidential submissions and requests for confidential treatment must conform with the requirements of section 201.6 of the Commission's rules (19 CFR 201.6).

Authority: These investigations are being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules (19 CFR 207.20).

By order of the Commission.

Issued: April 26, 1988.

[FR Doc. 88-9920 Filed 5-3-88; 8:45 am]

BILLING CODE 7020-02-M

APPENDIX B

LIST OF PARTICIPANTS IN THE COMMISSION'S HEARING IN THE INVESTIGATIONS

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject : Granular Polytetrafluoroethylene Resin from Italy and Japan

Invs. Nos. : 731-TA-385 and 731-TA-386 (Final)

Date and time: July 13, 1988 - 9:30 a.m.

Sessions were held in connection with the investigations in the Main Hearing Room (Room 101) of the United States International Trade Commission, 500 E Street, S.W., in Washington, DC.

In support of the imposition of antidumping duties:

Wilmer, Cutler, & Pickering--Counsel
Washington, DC
on behalf of--

E. I. Du Pont de Nemours & Co., Inc.

E. Robert Hill
Senior Marketing Programs Manager, Fluoropolymers
Robert Bonczek
Legal Counsel
Chuck Singleton
Industry Sales Manager, Fluoropolymers
Corinne M. Krupp
Economist, Department of Economics, University of Pennsylvania
Andrew Wechsler
Senior Economist, Economists Incorporated

John D. Greenwald)--OF COUNSEL
Eric R. Markus)--OF COUNSEL

Graham and James--Counsel
Washington, DC
on behalf of--

ICI Americas, Inc., a domestic producer of granular PTFE

Ray White, Fluoropolymers Product Manager, ICI Americas, Inc.

Vic Nunan, Fluoropolymers Director of Sales, ICI Americas, Inc.

Barbara Sanson, Esq., Attorney, ICI Americas, Inc.

Michael A. Hertzberg)--OF COUNSEL
Jeffrey L. Snyder)--OF COUNSEL

In opposition to the imposition of antidumping duties

O'Melveny & Myers--Counsel
Washington, DC
on behalf of--

Daikin Industries, Ltd.

Edward Walsh, Dewal Industries

Masanori Tomita, Gunze New York Inc.

Karen Ganly, Sumitomo Corporation of America

Samuel M. Rosenblatt, SMR, Inc.

F. Amanda DeBusk)--OF COUNSEL
Jerome M. Lehrman)--OF COUNSEL

Steptoe & Johnson--Counsel
Washington, DC
on behalf of--

Ausimont U.S.A., Inc.

Elliot Barber
Vice President, Corporate Planning, Ausimont, N.V.
Frank Rishe
Manager of Marketing, PTFE Polymers, Ausimont, U.S.A.
Perry Quick
Economist, Quick, Finan & Associates

Olin Wethington)--OF COUNSEL
Gracia M. Berg)--OF COUNSEL

APPENDIX C

NOTICES OF THE DEPARTMENT OF COMMERCE'S FINAL LTFV DETERMINATIONS ON GRANULAR PTFE RESIN

Notices

Federal Register
Vol. 53, No. 128
Tuesday, July 5, 1988

International Trade Administration

[A-588-707]

Final Determination of Sales at Less Than Fair Value; Granular Polytetrafluoroethylene Resin From Japan; Antidumping

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We have determined that granular polytetrafluoroethylene (PTFE) resin from Japan is being, or is likely to be, sold in the United States at less than fair value. The U.S. International Trade Commission (ITC) will determine, within 45 days of publication of this notice, whether these imports are materially

injuring, or are threatening material injury to, a United States industry.

EFFECTIVE DATE: July 5, 1988.

FOR FURTHER INFORMATION CONTACT: Raymond G. Busen (202) 377-3464 of Michael J. Ready (202) 377-2613, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

Final Determination

We have determined that granular PTFE resin from Japan is being, or is likely to be, sold in the United States at less than fair value, as provided in section 735(a) of the Tariff Act of 1930, as amended (the Act) (19 U.S.C. 1673d(a)). The estimated weighted-average margins are shown in the "Suspension of Liquidation" section of this notice.

Case History

On April 14, 1988, we made an affirmative preliminary determination (53 FR 12968, April 20, 1988). The following events have occurred since the publication of that notice.

The questionnaire responses from respondent Asahi Fluoropolymers Co., Ltd. (Asahi) were verified in the United States from May 2 to May 3 and in Japan from May 9 to May 13, 1988.

In accordance with § 353.47 of our regulations (19 CFR 353.47), interested parties were provided an opportunity to comment on our preliminary determination by requesting a public hearing. Interested parties waived their rights to a hearing and submitted comments for the record in briefs dated June 2 and 7, 1988.

While Asahi initially opposed the inclusion of filled PTFE resins within the scope of the order, on March 30, 1988, Asahi withdrew its opposition.

Scope of Investigation

In its petition, Du Pont asked the Department to investigate both filled and unfilled granular polytetrafluoroethylene (PTFE) resin as provided for in item 445.54 of the *Tariff Schedules of the United States* (TSUS) and currently classified under Harmonized System (HS) item 3904.61.00. Although Du Pont does not produce filled PTFE, Du Pont asked that it be included in the investigation to prevent the possible circumvention of any order on unfilled PTFE through the transfer of domestic U.S. filling operations abroad. Du Pont did not request that PTFE dispersions in water and fine powders be covered by this investigation; we accordingly have not included these products in our investigation.

In a March 30, 1988 submission, the respondent Asahi opposed the inclusion of filled PTFE resin within the scope of the investigation. On June 2, 1988, the petitioner reiterated its views that filled and unfilled granular PTFE resins constitute the same "class or kind" of merchandise. On June 7, 1988, Asahi withdrew its March 30 submission. Even though Asahi has withdrawn its opposition, we are still obliged to address the issues raised in order to properly define the merchandise subject to this investigation and any resulting order.

The issue of whether filled resins should be included in this investigation depends on whether it is within the same "class or kind" of merchandise as unfilled resins. In our preliminary determination, the Department found that both filled and unfilled resins are within the same class or kind of merchandise. After carefully reviewing this issue, we have found no reasons to alter this decision.

The product under investigation, granular PTFE resin, consists of three types: Pelletized, fine cut, and presintered. Of these three types only fine cut can be filled. In order to understand the class or kind of merchandise analysis which follows, it is necessary to understand that the various types of granular PTFE share the same production process and that filled granular fine cut PTFE arises from a continuation of this processing.

All three types are produced by the conversion of the tetrafluoroethylene (TFE) monomer into granular resin by suspension polymerization, a process unique to the production of granular, as opposed to other PTFE. This process is designed to enhance the handleability, moldability, physical and electrical properties of all types of granular PTFE resin.

Subsequent to the polymerization process, granular PTFE resin consists of stringy, raw polymers which are wet cut to achieve the desired size, pelletized (agglomerized) and dried. If granular fine cut or presintered resin is desired, the pelletized granular PTFE resin can be ground to form fine cut resin or ground and baked to form presintered resin. Once fine cut granular PTFE resin is formed, a producer may mix certain fillers or extenders, such as glass, bronze, carbon or graphite with the fine cut resin to strengthen the resin or enhance its mechanical properties. Filler can also be used merely to color the intemediate product in order to identify the product's source or dimension where the fabricator is unable to mark the product because of the consistency of PTFE.

In deciding that both filled and unfilled PTFE resin constitute one class or kind of merchandise, we have considered the following factors: (1) General physical characteristics; (2) the expectations of the ultimate purchasers; (3) the ultimate use of the merchandise in question; (4) channels of trade in which the product is sold; and (5) the manner in which the product is advertised and displayed.

First, filled and unfilled granular fine cut PTFE have the same general physical characteristics. Filled is simply unfilled fine cut PTFE with filler added. The filler is added to strengthen, color, or extend the unfiled fine cut resin. Adding filler is generally a simple process involving the mechanical mixing or stirring of the unfilled fine cut granular PTFE resin with the filler. According to the ITC preliminary determination report, filled PTFE is comprised on average of 20 percent filler material and 80 percent unfilled PTFE. *See* USITC Publication 2043 at A-3 (December 1987). Therefore, within this sub-division of the product under investigation, the base product, granular fine cut PTFE resin, generally constitutes the major portion of the product in question.

Second, with respect to ultimate use and customer expectations, the filling process produces a filled fine cut granular PTFE resin, similar in processabiity to unfilled fine cut granular PTFE resin. Most granular PTFE resin (filled and unfilled) is sold to fabricators. Fabricators expect to further process all granular PTFE resin by molding or extruding the resin under pressure in order to produce a variety of intermediate molded shapes and mechanical parts.

Third, the vast majority of granular PTFE resin is sold directly to fabricators who use the resin to produce a wide range of intermediate mechanical, chemical and electrical products.

Finally, we have no evidence that the manner in which the product was advertised and displayed is not the same.

On balance, we conclude that filled and unfilled granular PTFR resin comprise a single class or kind of merchandise. To exclude filled granular fine cut PTFE resin, which is merely a sub-category of granular fine cut PTFE resin, from this investigation would result in an unduly narrow definition of the product subject to this investigation.

Standing

We preliminarily determined that the petitioner, Du Pont, had standing with respect to both filled and unfilled granular PTFE resins, based on the facts that (1) Du Pont filed its petition on behalf of the granular PTFR resin industry; (2) no producer not excudable under section 771(4)(B) of the Act has objected to the inclusion of filled granular PTFE resin within the scope of the investigation; (3) the ITC preliminarly found that there is one industry producing one like product in the United States; and (4) Du Point manufactures the product under investigation, granular PTFE resin. Therefore, in accordance with section 771(9)(C) of the Act (19 U.S.C. 1677(9)(C)), we preliminarly found that the petition was brought on behalf of the U.S. industry and that Du Pont is an interested party with respect to the "like product", granular PTFE resin.

With respect to claims that the petition was not filed on behalf of the industry producing granular PTFE resins, on June 7, 1988, counsel for Asahi and ICI formally withdrew the March 30, 1988, submission. Therefore, we have no basis to find that the petition was not brought on behalf of the U.S. industry.

Moreover, we have continued to find that Du Pont is an interested party with respect to the "like product," granular PTFE resin, and has standing to bring a case with respect to filled PTFE resin. Although the parties have submitted various arguments on this issue, we have not received sufficient evidence to reach a decision contrary to that in our preliminary determination. Nevertheless, because of the importance we placed in our preliminary determination on the ITC's finding of one like product and one industry, we will not consider Du Pont to have standing with respect to filled granular PTFE resins (since, as noted above, Du Pont does not produce filled), if the ITC determines finally that filled and unfilled are separate like products. As a result, if the ITC finds separate like products, we will rescind the initiation of this investigation as it pertains to filled PTFE resin.

Fair Value Comparisons

To determine whether sales of granular PTFE resin from Japan to the United States were made at less than fair value, we compared the United States price to the foreign market value as specified below. Since Daikin failed to respond to our questionnaire, we have determined that use of best information available is appropriate, in accordance with section 776(b) of the Act. This statutory provision requires the Department to use best information available "whenever a party or any other person refuses or is unable to produce information requested in a timely manner or in the form required, or cherwise significantly impedes an investigation." Therefore, we have assigned Daikin, as best information available, the margin supplied in the petition. This is the same rate as it was assigned in the preliminary determination.

With regard to Asahi, it did not respond to the Department's request for information concerning sales of filled PTFE resins by ICI Americas Inc. (ICIA), a related party, to unrelated U.S. customers. Therefore, for that portion of its margin attributable to filled PTFE resins, we have assigned it, as best information available, the margin supplied in the petition. This is also the same rate as it was assigned in the preliminary determination.

The period of investigation for granular PTFE resin from Japan was June 1, 1987 through November 30, 1987.

United States Price

For all sales by Asahi of unfilled granular PTFE resin, we based United States Price on exporter's sales price (ESP), in accordance with section 772(c) of the Act, since the first sale to an unrelated customer was made after importation. We calculated exporter's sales price based on packed, ex-warehouse or delivered prices to unrelated purchasers in the United States. We made deductions, where appropriate, for foreign inland freight and insurance, brokerage and handling charges, ocean freight, marine insurance, U.S. duty, U.S. inland freight, credit expenses and other U.S. selling expenses pursuant to sections 772(e) (1) and (2) of the Act.

Foreign Market Value

In accordance with section 773 of the Act, we calculated foreign market value for sales of unfilled granular PTFE resin by Asahi based on packed, delivered prices to unrelated purchasers in Japan. We made deductions, where appropriate, for inland freight and insurance, credit and warranty expenses. We deducted indirect selling expenses incurred on home market sales up to the amount of indirect selling expenses incurred on sales in the U.S. market, in accordance with § 353.15(c) of our regulations.

In order to adjust for differences in packing between the two markets, we deducted home market packing costs from foreign market value and added U.S. packing costs.

Currency Conversion

Since all U.S. sales were exporter's sales price transactions, we used the official exchange rates in effect on the date of sale, in accordance with section 773(a)(1) of the Act, as amended by section 615 of the Trade and Tariff Act of 1984. All currency conversions were made at rates certified by the Federal Reserve Bank of New York.

Verification

As provided in section 776(a) of the Act, we verified all information used in reaching the final determination in this investigation. We used standard verification procedures, including examination of relevant accounting records and original source documents provided by the respondent.

Interested Party Comments

Comment 1: As noted in the "Scope of Investigation" section of our preliminary determination (53 FR 12968, April 20, 1988), the petitioner requested in the petition that filled granular PTFE resin be included in our investigation to prevent probable circumvention of a final dumping order on unfilled granular PTFE resin. On June 2, 1988, petitioner reiterated its views that filled and unfilled granular PTFE resins constitute the same "class or kind" of merchandise.

On June 7, 1988, respondent Asahi withdrew its March 30, 1988 submission in opposition to the inclusion of filled PTFE resins within the scope of the investigation.

DOC Position: As noted in the "Scope of Investigation" section of this notice, we have continued to treat all granular PTFE resins, both filled and unfilled, as one class or kind of merchandise.

Comment 2: Asahi argues that the Department should deduct the amount of indirect selling expenses incurred in the United States market as stated in Asahi's response to the questionnaire because the methodology used to obtain the claimed amount as both reasonable and accurate given the manner in which the product was sold. Asahi claims that the sales under consideration did not require as much technical and/or selling effort as did the sales of other ICIA products and, therefore, should bear a smaller proportion of total U.S. indirect selling expenses.

DOC Position: At verification, ICIA was unable to provide documentation in support of its contention that the sales under consideration should be allocated a smaller proportion of U.S. indirect selling expenses than other products

sold by ICIA. Furthermore, we verified that ICIA's indirect selling expenses were substantially more than what was reported. On June 13, 1988, six weeks after verification of Asahi's questionnaire response, Asahi submitted information in support of its claim. Since the information was not submitted in a timely fashion, we were unable to verify it, and it could not be considered for our final determination. Therefore, we rejected the amount in the questionnaire response and allocated the verified amount of total U.S. indirect selling expenses over total fluoropolymer products sold by ICIA during the same time period.

Continuation of Suspension of Liquidation

We are directing the U.S. Customs Service to continue to suspend liquidation of all entries of granular PTFE resin from Japan that are entered or withdrawn from warehouse, for consumption, on or after April 20, 1988, the date of publication of the preliminary determination in the **Federal Register**. The Customs Service shall continue to require a cash deposit or posting of a bond equal to the estimated amounts by which the foreign market value of granular PTFE resin from Japan exceeds the United States price, as shown below. This suspension of liquidation will remain in effect until further notice.

The weighted-average margins are as follows:

Manufacturer/producer/exporter	Weighted-average margin percentage
Daikin Industries, Inc.	103.00
Asahi Fluoropolymers Co., Ltd.	51.45
All others	91.74

This suspension of liquidation covers imports of granular PTFE resin from Japan as defined in the "Scope of Investigation" section of this notice.

ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our determination. If the ITC determines that material injury, or threat of material injury, does not exist, this proceeding will be terminated and all securities posted as a result of the suspension of liquidation will be refunded. However, if the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing Customs officers to assess an antidumping duty on granular PTFE resin from Japan entered, or withdrawn from warehouse, for consumption after the suspension of liquidation, equal to the amount by which the foreign market value exceeds the U.S. price.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)).

Jan W. Mares,

Assistant Secretary for Import Administration.

June 27, 1988.

[FR Doc. 88-15037 Field 7-1-88; 8:45 am]

BILLING CODE 3510-DS-M

International Trade Administration

[A-475-703]

Final Determination of Sales at Less That Fair Value: Granular Polytetrafluoroethylene Resin From Italy

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We have determined that granular polytetrafluoroethylene (PTFE) resin from Italy is being, or is likely to be, sold in the United States at less than fair value. The U.S. International Trade Commission (ITC) will determine, within 45 days of publication of this notice, whether these imports are materially injuring, or are threatening material injury to, a United States industry.

EFFECTIVE DATE: July 11, 1988.

FOR FURTHER INFORMATION CONTACT: Brian H. Nilsson or Michael Ready, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230, telephone: (202) 377-5332 or 377-2613.

SUPPLEMENTARY INFORMATION:

Final Determination

We have determined that granular PTFE resin from Italy is being, or is likely to be, sold in the United States at less than fair value, as provided in section 735(a) of the Tariff Act of 1930, as amended (19 U.S.C. 1673d(a)) (the Act). The weighted-average margins are shown in the "Continuation of Suspension of Liquidation" section of this notice.

Case History

Since our notice of an affirmative preliminary determination (53 FR 12967, April 20, 1988) the following events have occurred. On April 27–29 and May 11–12, 1988, we conducted verification at the Montefluos S.p.A. ("Montefluos") and Ausimont U.S.A. ("Ausimont") offices, respectively.

In accordance with § 353.47 of our regulations (19 CFR 353.47), interested parties were provided an opportunity to comment on our preliminary determination by requesting a public hearing. Interested parties waived their rights to a hearing and submitted comments for the record in briefs dated June 8, 12, and 21, 1988.

Scope of Investigation

In its petition, Du Pont asked the Department to investigate both filled and unfilled granular polytetrafluoroethylene (PTFE) resin as provided for in item 445.54 of the *Tariff Schedules of the United States* (TSUS) and currently classified under Harmonized System (HS) item 3904.61.00. Although Du Pont does not produce filled PTFE, Du Pont asked that filled PTFE be included in the investigation to prevent the possible circumvention of any order on unfilled PTFE. Du Pont did not request that PTFE dispersions in water and fine powders be covered by this investigation; we accordingly have not included these products in our investigation.

The issue of whether filled resin should be included in this investigation depends on whether it is within the same "class or kind" of merchandise as unfilled resins. In our preliminary determination, the Department found that both filled and unfilled resins are within the same class or kind of merchandise. After carefully reviewing this issue, we have found no reasons to alter this decision.

The product under investigation, granular PTFE resin, consists of three types: Pelletized, fine cut, and presintered. Of these three types only fine cut can be filled. In order to understand the class or kind of merchandise analysis which follows, it is necessary to understand that the varous types of granular PTFE share the same production process and that filled granular fine cut PTFE arises from a continuation of this processing.

All three types are produced by the conversion of the tetrafluoroethylene (TFE) monomer into granular resin by suspension polymerization, a process unique to the production of granular, as opposed to other PTFE. This process is designed to enhance the handleability, moldability, physical and electrical properties of all types of granular PTFE resin.

Subsequent to the polymerization process, granular PTFE resin consists of stringy, raw polymers which are wet cut to achieve the desired size, are pelletized (agglomerized), and are dried. If granular fine cut or presintered resin is desired, the pelletized granular PTFE resin can be ground to form fine cut resin or ground and baked to form presintered resin. Once fine cut granular PTFE resin is formed, a producer may mix certain fillers or extenders, such as glass, bronze, carbon, or graphite, with the fine cut resin to strengthen the resin or enhance its mechanical properties. Filler can also be used merely to color the intermediate product in order to identify the product's source or dimension, where the fabricator is unable to mark the product because of the consistency of the granular PTFE.

In deciding that both filled and unfilled granular PTFE resin constitute one class or kind of merchandise, we have considered the following factors: (1) General physical characteristics; (2) the expectations of the ultimate purchasers; (3) the ultimate use of the merchandise in question; (4) the channels of trade in which the product is sold; and (5) the manner in which the product is advertised and displayed.

First, filled and unfilled granular fine cut PTFE have the same general physical characteristics. Filled is simply unfilled fine cut PTFE with filler added. The filler is added to strengthen, color, or extend the unfilled fine cut resin. Adding filler is generally a simple process involving the mechanical mixing or stirring of the unfilled fine cut granular PTFE resin with the filler. According to the ITC preliminary determination report, filled PTFE is comprised on average of 20 percent filler material and 80 percent unfilled PTFE. *See* USITC Publication 2043 at A–3 (December 1987). Therefore, within this subdivision of the product under investigation, the base product, granular fine cut PTFE resin, generally constitutes the major portion of the product in question.

Second, with respect to ultimate use and customer expectations, the filling process produces a filled fine cut granular PTFE resin, similar in processability to unfilled fine cut granular PTFE resin. Most granular PTFE resin (filled and unfilled) is sold to fabricators. Fabricators expect to further process all granular PTFE resin by molding or extruding the resin in order to produce a variety of intermediate molded shapes and mechanical parts.

Third, the vast majority or granular PTFE resin is sold directly to fabricators who use the resin to produce a wide range of intermediate mechanical, chemical, and electrical products.

Finally, we have no evidence that the manner in which the product was advertised and displayed is not the same.

On balance, we concluded that filled and unfilled granular PTFE resins comprise a single class or kind of merchandise. To exclude filled granular fine cut PTFE resin, which is merely a sub-category of granular fine cut PTFE resin, from this investigation would result in an unduly narrow definition of the product subject to this investigation.

Standing

We preliminarily determined that the petitioner, Du Pont, had standing with respect to both filled and unfilled granular PTFE resins, based on the facts that (1) Du Pont filed its petition on behalf of the granular PTFE resin industry; (2) no producer eligible for inclusion under section 771(4)(B) of the Act has objected to the inclusion of filled granular PTFE resin within the scope of the investigation; (3) the ITC preliminarily found that there is one industry producing one like product in the United States; and (4) Du Pont manufactures the product under investigation, granular PTFE resin. Therefore, in accordance with section 771(9)(C) of the Act (19 U.S.C. 1677(9)(C)), we preliminarily found that the petition was brought on behalf of the U.S. industry and that Du Pont is an interested party with respect to the "like" product, granular PTFE resin.

In their June 13, 1988, brief, counsel for respondent Montefluos S.p.A/Ausimont U.S.A. alleged that producers accounting for 87 percent of the domestic production of filled PTFE oppose an investigation of that product, citing only to a March 3, 1988, submission by Asahi Fluoropolymers Co., Ltd. ("Asahi") and ICI-Americas, Inc. ("ICI"), respondents in the companion case involving granular PTFE resin from Japan. However, one week earlier, counsel for Asahi and ICI formally withdrew the March 30, 1988 submission. Therefore, since the only evidence which respondent filed to support the alleged opposition to Du Pont's standing with regard to filled granular PTFE has been withdrawn, we have no basis to find that the petition was not filed on behalf of the U.S. granular PTFE industry.

Moreover, we have continued to find that Du Pont is an interested party with respect to the "like" product, granular PTFE resin, and has standing to bring a

case with respect to filled granular PTFE resin. Although the parties have submitted various arguments on this issue, we have not received sufficient evidence to reach a decision contrary to that in our preliminary determination. Nevertheless, because of the importance we placed in our preliminary determination on the ITC's finding of one "like" product and one industry, we will not consider Du Pont to have standing with respect to filled granular PTFE resins (since, as noted above, Du Pont does not produce the filled product), if the ITC finds in their final detrmination that filled and unfilled are separate like products. As a result, if the ITC finds separate like products, we will rescind the initiation of this investigation as it pertains to filled granular PTFE resin.

Period of Investigation

The period of investigation is June 1, 1987, through November 30, 1987.

Such or Similar Comparisons

We determined that Montefluos had sufficient home market sales of such or similar merchandise to form the basis for calculating foreign market value. Where possible, we compared sales of identical merchandise in the two markets. Where identical merchandise was not sold in both markets, we based our comparisons on the most similar merchandise within each product category, basing our matches on basic properties, average particle size, bulk density, radial shrinkage, and transfroming conditions. Montefluos has claimed, and we verified, that there is no difference in costs between the grades within each of the three types. Therefore, where comparisons of similar merchandise were made, they were done between grades within a given type and no adjustments for differences in merchandise were required.

Fair Value Comparisons

To determine whether sales of granular PTFE resin from Italy to the United States were made at less than fair value, we compared the United States price to the foreign market value as specified below. Montefluos failed to report data on sales of filled granular PTFE resins. For purposes of our final determination, the dumping margin for sales or filled resins was based on best information available, to compensate for that percentage of sales not reported, in accordance with section 776(b) of the Act. This statutory provision requires the Department to use best information available "whenever a party or any other person refuses or is unable to produce information requested in a timely manner or in the form required, or otherwise significantly impedes an investigation." Therefore, we have assigned Montefluos, as best information available for its filled granular PTFE sales, the margin provided in the petition. This margin has been factored into Montefluos' weighted-average margin.

United States Price

For all sales by Montefluos of unfilled granular PTFE resin, we based United States price on exporter's sales price (ESP), in accordance with section 772(c) of the Act, since the first sale to an unrelated customer was made after importation. We calculated exporter's sales price based on packed c.i.f. duty paid prices to unrelated purchasers in the United States. We made deductions, where appropriate, for brokerage and handling, ocean freight, insurance charges, U.S. duty, U.S. inland freight, credit expenses, and other U.S. selling expenses pursuant to section 772(e) (1) and (2) of the Act.

Foreign Market Value

In accordance with section 773(a) of the Act, we calculated foreign market value for sales of unfilled granular PTFE resin by Montefluos based on packed, c.i.f. delivered prices to unrelated purchasers. We made deductions, where appropriate, for inland freight and insurance, credit, rebates, and warranty expenses. We deducted indirect selling expenses incurred on home market sales up to the amount of such selling expenses incurred on sales in the United States, in accordance with § 353.15(c) of our regulations.

In order to adjust for differences in packing between the two markets, we deducted home market packing costs from the foreign market value and added U.S. packing costs.

Currency Conversion

Since all U.S. sales were exporter's sales price transactions, we used the official exchange rates in effect on the date of sale, in accordance with section 773(a)(1) of the Act, as amended by section 615 of the Trade and Tariff Act of 1984. All currency conversions were made at rates certified by the Federal Reserve Bank of New York.

Verification

As provided in section 776(a) of the Act, we verified all information used in reaching the final determination in this investigation. We used standard verification procedures, including examination of relevant accounting records and original source documents provided by the respondent.

Interested Party Comments

Comment 1: The respondent has argued that the Department should not include filled PTFE resins within the scope of the investigation because (1) Du Pont, the sole petitioner and the only company supporting the petition, does not produce filled resins and, therefore, does not have the requisite standing to warrant an investigation of filled PTFE; (2) Du Pont's fear of circumvention, its sole reason for including filled PTFE in the petition, is unfounded, since (a) filled PTFE cannot be reprocessed or converted into unfilled PTFE or marketed as a substitute for unfilled PTFE and (b) the U.S. producers that account for about 90 percent of the U.S. production of filled PTFE make their own unfilled PTFE which is used as an input for the filled product; (3) filled PTFE cannot be substituted for unfilled PTFE since it is a different product in use and composition; and (4) two of the four producers of filled resins in the United States, who hold the vast majority of the U.S. market share for filled resins, oppose the inclusion of filled PTFE within the scope of the investigation.

The petitioner argues that the Department should maintain filled resins within the scope of the investigation because (1) filled resins fall within the same class or kind of merchandise as unfilled resins, according to the criteria normally used by the Department; (2) the possibility of circumvention remains an issue; (3) the ITC found that filled and unfilled resins are within one "like" product category; and (4) one of the two major U.S. producers of filled resins formally withdrew its opposition to the inclusion of filled PTFE within the scope of the investigation.

DOC Position: We agree with the petitioner. We have found that filled and unfilled granular PTFE resins are within the same class or kind of merchandise, as discussed in the "Scope of Investigation" section of this notice. We all conclude that petitioner does have the requisite standing at this time, as discussed in the "Standing" section above.

Comment 2: Respondent contends that in the preliminary determination the Department erroneously adjusted exporter sales prices in the United States for indirect selling expenses relative to U.S. sales that were incurred by Montefluos S.p.A. in Italy. They request that these expenses be deleted from the Department's final determination.

DOC Position: We disagree on two points. First, at the preliminary determination the Department did not make such an adjustment to the U.S. sales prices for these direct selling expenses. Secondly, we reviewed our adjustments to U.S. prices for indirect selling expenses after the preliminary determination and found that this additional adjustment was indeed necessary. When adjusting exporter sales price transactions, the Department deducts all indirect selling expenses related to U.S. sales, regardless of the geographical location where the expenses were incurred. This practice is consistent with 19 U.S.C. 1677a(e)(2) and has been upheld by the Court of International Trade. *See Silver Reed America v. United States*, CIT, Slip Op. 88-5 (January 12, 1988), *rev'd*, Slip Op. 88-37 (March 18, 1988). Accordingly, we have adjusted U.S. sales prices for both the indirect selling expenses incurred by Ausimont U.S.A and those incurred by Montefluos S.p.A. for sales destined to the United States.

Continuation of Suspension of Liquidation

We are directing the U.S. Customs Service to continue to suspend liquidation of all entries of granular PTFE resin from Italy, as defined in the "Scope of Investigation" section of this notice, that are entered or withdrawn from warehouse, for consumption, on or after April 20, 1988, the date of publication of the preliminary determination notice in the **Federal Register**. The U.S. Customs Service shall continue to require a cash deposit or posting of a bond equal to the estimated amounts by which the foreign market value of granular PTFE resin from Italy exceeds the United States price, as shown below. This suspension of liquidation will remain in effect until further notice. The weighted-average margins are as follows:

Manufacturer/producer/exporter	Weighted-average margin percentage
Montefluos S.p.A/Ausimont U.S.A.	46.46
All others	46.46

ITC Notification

The accordance with section 735(d) of the Act, we have notified the ITC of our determination. If the ITC determines that material injury, or threat of material injury, does not exist, this proceeding will be terminated and all securities posted as a result of the suspension of liquidation will be refunded or cancelled. However, if the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing Customs officers to assess an antidumping duty on granular PTFE resin from Italy entered, or withdrawn from warehouse, for consumption after the suspension of liquidation, equal to the amount by which the foreign market value exceeds the United States price.

The ITC will determine whether these imports are materially injuring, or threaten material injury to, a U.S. industry before the later of 120 days after the date of the preliminary determination or 45 days after final determination, if affirmative.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)).

Jan W. Mares,

Assistant Secretary for Import Administration.

July 5, 1988.

[FR Doc. 88-15496 Filed 7-8-88; 8:45 am]

BILLING CODE 3510-DS-M

APPENDIX D

SHARES OF APPARENT U.S. CONSUMPTION REPRESENTED BY TRADE NAMES OF U.S. PRODUCERS AND FOREIGN EXPORTERS

Table D-1
Unfilled granular PTFE: U.S. producers' and foreign exporters' trade names and shares of apparent U.S. consumption, by firms, 1987

Firm	PTFE trade name	Share of apparent U.S. consumption 1/
U.S. producers:		
Ausimont U.S.A.	Halon	***
Du Pont	Teflon	***
ICI Americas	Fluon	***
Italian and Japanese exporters:		
Daikin Industries	Daiflon	***
Montefluos	Algoflon	***
Other exporters	2/	***
Total 3/		100.0

1/ Shares are based on the quantity of domestic shipments by U.S. producers and by importers of unfilled granular PTFE from Italy and Japan.
2/ Primarily "Hostaflon," trade name for unfilled granular PTFE imported from West Germany by Hoechst Celanese, Inc.
3/ Includes small amounts of imports by Du Pont and ICI Americas from their joint ventures in Japan.

Source: Derived from data submitted in response to questionnaires of the U.S. International Trade Commission.

APPENDIX E

IMPORTS OF PTFE FINE POWDERS AND DISPERSIONS

Table E-1
PTFE fine powders and dispersions: U.S. imports, 1985-87, January-March 1987, and January-March 1988 1/

Item	1985	1986	1987	January-March-- 1987	1988
PTFE fine powders:					
Quantity (1,000 pounds).....	1,382	1,889	1,936	409	372
Value (1,000 dollars).....	6,812	9,873	12,122	1,832	2,397
Unit value.....	$4.93	$5.23	$6.26	$4.48	$6.44
Share of total PTFE imports by quantity (percent).....	29.11	31.81	29.73	23.55	25.41
PTFE dispersions:					
Quantity (1,000 pounds).....	***	***	***	***	***
Value (1,000 dollars).....	***	***	***	***	***
Unit value.....	***	***	***	***	***
Share of total PTFE imports by quantity (percent).....	***	***	***	***	***

1/ * * *.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

APPENDIX F

U.S. PRODUCERS' SHIPMENTS OF GRANULAR PTFE, 1981-84

Table F-1
Granular PTFE: U.S. producers' domestic shipments and company transfers, by firms, 1981-84

Item	1981	1982	1983	1984
Quantity:				
Unfilled granular PTFE:				
Ausimont (1,000 pounds).	***	***	***	***
ICI (1,000 pounds).....	***	***	***	***
Du Pont (1,000 pounds)..	***	***	***	***
Total (1,000 pounds)..	***	***	***	***
Filled granular PTFE:				
Ausimont (1,000 pounds).	***	***	***	***
LNP Corp. 1/ (1,000 pounds).....	***	***	***	***
Custom Compounding (1,000 pounds).....	***	***	***	***
Whitford Polymers (1,000 pounds).....	2/	2/	2/	2/
Total (1,000 pounds)..	***	***	***	***
All granular PTFE:				
Ausimont (1,000 pounds).	***	***	***	***
Du Pont (1,000 pounds)..	***	***	***	***
ICI (1,000 pounds).....	***	***	***	***
LNP Corp. 1/ (1,000 pounds).....	***	***	***	***
Custom Compounding (1,000 pounds).....	***	***	***	***
Whitford Polymers (1,000 pounds).....	2/	2/	2/	2/
Total (1,000 pounds)..	6,184	6,455	7,669	9,338
Value:				
Unfilled granular PTFE:				
Ausimont (1,000 dollars)	***	***	***	***
ICI (1,000 dollars).....	***	***	***	***
Du Pont (1,000 dollars).	***	***	***	***
Total (1,000 dollars).	***	***	***	***
Filled granular PTFE:				
Ausimont (1,000 dollars)	***	***	***	***
LNP Corp. 1/ (1,000 dollars).....	***	***	***	***
Custom Compounding (1,000 dollars).....	***	***	***	***
Whitford Polymers (1,000 dollars).....	2/	2/	2/	2/
Total (1,000 dollars).	***	***	***	***
All granular PTFE:				
Ausimont (1,000 dollars)	***	***	***	***
Du Pont (1,000 dollars).	***	***	***	***
ICI (1,000 dollars).....	***	***	***	***
LNP Corp. 1/ (1,000 dollars).....	***	***	***	***
Custom Compounding (1,000 dollars).....	***	***	***	***
Whitford Polymers (1,000 dollars).....	2/	2/	2/	2/
Total (1,000 dollars).	30,073	33,779	36,199	44,536

Footnotes presented at end of table.

Table F-1--Continued
Granular PTFE: U.S. producers' domestic shipments and company transfers, by firms, 1981-84

Item	1981	1982	1983	1984
Unit Value:				
Unfilled granular PTFE:				
Ausimont (per pound)....	***	***	***	***
ICI (per pound).....	***	***	***	***
Du Pont (per pound).....	***	***	***	***
Average (per pound)...	***	***	***	***
Filled granular PTFE:				
Ausimont (per pound)....	***	***	***	***
LNP Corp. 1/ (per pound).....	***	***	***	***
Custom Compounding (per pound).....	***	***	***	***
Whitford Polymers (per pound).....	2/	2/	2/	2/
Average (per pound)...	***	***	***	***
All granular PTFE:				
Ausimont (per pound)....	***	***	***	***
Du Pont (per pound).....	***	***	***	***
ICI (per pound).....	***	***	***	***
LNP Corp. 1/ (per pound).....	***	***	***	***
Custom Compounding (per pound).....	***	***	***	***
Whitford Polymers (per pound).....	2/	2/	2/	2/
Average (per pound)...	$4.86	$5.23	$4.72	$4.77

1/ During this period, LNP Corp. was an independent company; it was acquired by ICI in early 1985.
2/ Whitford Polymers did not begin operations until November 1985.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

APPENDIX G

SELECTED FINANCIAL DATA OF U.S. PRODUCERS ON THEIR OPERATIONS PRODUCING UNFILLED GRANULAR PTFE

Table G-1
Unfilled granular PTFE: Selected financial data, on a per-unit basis, of U.S. producers on their operations producing unfilled granular PTFE, by firms, accounting years 1985-87 and interim periods ended Mar. 31, 1987, and Mar. 31, 1988

Item	1985	1986	1987	Interim period ended Mar. 31- 1987	1988
	Unit value (per pound)				
Net sales:					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal	***	***	***	***	***
Ausimont U.S.A.	***	***	***	***	***
Average	$4.32	$3.91	$4.07	$4.06	$4.13
Gross Profit or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal	***	***	***	***	***
Ausimont U.S.A.	***	***	***	***	***
Average	0.56	0.43	0.27	0.32	0.86
Operating income or (loss):					
Du Pont	***	***	***	***	***
ICI	***	***	***	***	***
Allied-Signal	***	***	***	***	***
Ausimont U.S.A.	***	***	***	***	***
Average	(0.14)	(0.19)	(0.45)	(0.32)	0.22

Source: Derived from data submitted in response to questionnaires of the U.S. International Trade Commission.

APPENDIX H

IMPACT OF IMPORTS ON U.S. PRODUCERS' GROWTH, INVESTMENT, AND ABILITY TO RAISE CAPITAL

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APPENDIX I

INFORMATION ON MONTEFLUOS' PIERRE-BENITE FACILITY

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