Acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain

Investigation Nos. 731-TA-1435-1440 (Preliminary)

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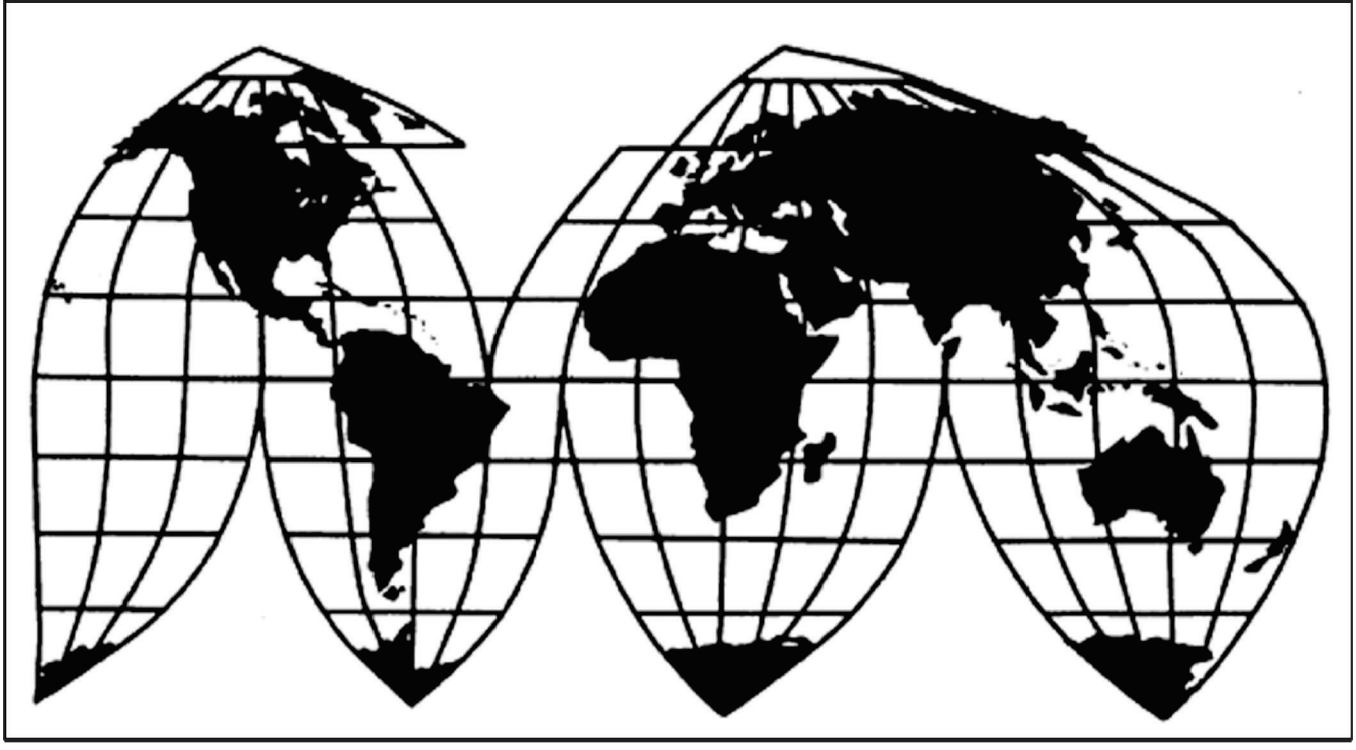
U.S. International Trade Commission



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U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 731-TA-1435-1440 (Preliminary)
Acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain

DETERMINATION

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of acetone from Belgium, Korea, Singapore, South Africa, and Spain, provided for in subheading 2914.11.10 and 2914.11.50 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV").[2] In addition, the Commission terminates the antidumping duty investigation on acetone from Saudi Arabia.

COMMENCEMENT OF FINAL PHASE INVESTIGATION

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the U.S. Department of Commerce ("Commerce") of an affirmative preliminary determination in the investigation under section 733(b) of the Act, or, if the preliminary determination is negative, upon notice of an affirmative final determination in that investigation under section 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigation. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

BACKGROUND

On February 19, 2019, AdvanSix Inc., Parsippany, New Jersey, Altivia Petrochemicals, LLC, Haverhill, Ohio, and Olin Corporation, Clayton, Missouri filed a petition with the Commission and Commerce, alleging that an industry in the United States is materially injured

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[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] Acetone from Belgium, the Republic of Korea, the Kingdom of Saudi Arabia, Singapore, the Republic of South Africa, and Spain: Initiation of Less-Than-Fair-Value Investigations, 84 FR 9755 (March 18, 2019).

by reason of LTFV imports of acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain. Accordingly, effective February 19, 2019, the Commission, pursuant to section 733(a) of the Act (19 U.S.C. 1673b (a)), instituted antidumping duty Investigation Nos. 731-TA-1435-1440 (Preliminary).

Notice of the institution of the Commission's investigation and of a public conference 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 February 28, 2019 (*84 FR 6819*). The conference was held in Washington, DC, on March 12, 2019, and all persons who requested the opportunity were permitted to appear in person or by counsel.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of acetone from Belgium, Korea, Singapore, South Africa, and Spain that are allegedly sold in the United States at less than fair value ("LTFV"). We also determine that imports of acetone from Saudi Arabia that are allegedly sold in the United States at LTFV are negligible and terminate the investigation with respect to Saudi Arabia.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

These investigations resulted from petitions filed on February 19, 2019, alleging that an industry in the United States is materially injured and threatened with material injury by reason of LTFV imports of acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain. Petitioner is the Coalition for Acetone Fair Trade, consisting of AdvanSix Inc. ("AdvanSix"), Altivia Petrochemicals, LLC ("Altivia"), and Olin Corporation ("Olin"), domestic producers of acetone (collectively, "petitioner"). Petitioner submitted a postconference brief and witnesses from each of the petitioning domestic producers appeared at the staff conference.

Five respondent groups appeared at the conference and submitted postconference briefs.

- Mitsui Phenols Singapore Pte. Ltd., a producer and exporter of the subject merchandise in Singapore, CEPSA Quimica S.A., a producer and exporter of the subject merchandise in Spain, Monument Chemical, LLC, and The Plaza Group, Inc., importers of subject merchandise (collectively, "Joint Respondents");

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996).

[2] *American Lamb Co*., 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

- INEOS Europe AG, a producer and exporter of the subject merchandise in Belgium, and INEOS Americas LLC ("INEOS Americas"), a domestic producer and importer of subject merchandise (collectively, "INEOS");

- Lucite International, Inc. ("Lucite"), an importer of subject merchandise;

- Sasol Chemicals (USA) LLC and Sasol Chemicals North America LLC, importers of subject merchandise, and Sasol South Africa Limited, a producer and exporter of subject merchandise in South Africa (collectively, "Sasol"); and

- Saudi Basic Industries Corporation ("SABIC"), Saudi Kayan Petrochemical Company ("Saudi Kayan"), and Rabigh Refining & Petrochemical Co. ("Petro Rabigh"), producers of the subject merchandise in Saudi Arabia (collectively, "Saudi Producers").

U.S. industry data are based on the questionnaire responses of six producers, accounting for the vast majority of U.S. production of acetone during the period of investigation (January 2016-December 2018) ("POI").[3] U.S. import data are based on official import statistics.[4] The Commission received questionnaire responses from 12 U.S. importers, accounting for 95.5 percent of subject imports from Belgium, 66.2 percent of subject imports from Korea, 33.0 percent of subject imports from Saudi Arabia, 50.4 percent of subject imports from Singapore, 86.4 percent of subject imports from South Africa, and 42.8 percent of subject imports from Spain.[5]

The Commission received responses to its foreign producer questionnaire from one firm in Belgium, two firms in Korea, one firm in Saudi Arabia, two firms in Singapore, one firm in South Africa, and one firm in Spain.[6] These firms' exports to the United States accounted for approximately 100 percent of exports to the United States from the six subject countries.[7]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[8] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or

[3] Confidential Report, INV-RR-018 (March 29, 2019) as amended by INV-RR-023 (April 3, 2019) ("CR") at I-5; Public Report ("PR") at I-31.

[4] CR at I-5, PR at I-4.

[5] CR at I-4, V-1, PR at I-4, V-1.

[6] CR at VII-3, VII-9, VII-21, VII-27, VII-32, PR at VII-3, VII-7, VII-11, VII-15, VII-19, VII-22.

[7] *See* CR at VII-3, VII-9, VII-21, VII-27, VII-32, PR at VII-3, VII-7, VII-11, VII-15, VII-19, VII-22.

[8] 19 U.S.C. § 1677(4)(A).

those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[9] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[10]

The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[11] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[12] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[13] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at LTFV,[14] the Commission determines what domestic product is like the imported articles Commerce has identified.[15] The Commission may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[16]

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[9] 19 U.S.C. § 1677(4)(A).

[10] 19 U.S.C. § 1677(10).

[11] *See, e.g., Cleo Inc. v. United States,* 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce,* 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[12] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[13] *See*, *e.g.*, *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49*; see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[14] *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[15] *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

[16] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 at 8 n.34 (Nov. 2001); *Torrington,* 747 F. Supp. at 748-49 (holding that the (Continued…)

A. Scope Definition

In its notice of initiation, Commerce defined the imported merchandise within the scope of these investigations as:

> all grades of liquid or aqueous acetone. Acetone is also known under the International Union of Pure and Applied Chemistry (IUPAC) name propan-2-one. In addition to the IUPAC name, acetone is also referred to as +-ketopropane (or betaketopropane), ketone propane, methyl ketone, dimethyl ketone, DMK, dimethyl carbonyl, propanone, 2-propanone, dimethyl formaldehyde, pyroacetic acid, pyroacetic ether, and pyroacetic spirit. Acetone is an isomer of the chemical formula C_3H_6O, with a specific molecular formula of CH_3COCH_3 or $(CH_3)_2CO$.
>
> The scope includes acetone that is combined or mixed with other products, including, but not limited to, isopropyl alcohol, benzene, diethyl ether, methanol, chloroform, and ethanol, regardless of the quantity or value of the acetone component. For such combined products, only the acetone component is covered by the scope of these investigations. Acetone that has been combined with other products is included within the scope, regardless of whether the combining occurs in third countries. Notwithstanding the foregoing language, an acetone combination or mixture that is transformed through a chemical reaction into another product, such that, for example, the acetone can no longer be separated from the other products through a distillation process (*e.g.,* methyl methacrylate (MMA) or Bisphenol A (BPA)) is excluded from these investigations.
>
> The scope also includes acetone that is commingled with acetone from sources not subject to these investigations, regardless of the quantity or value of the subject acetone component. Only the subject merchandise component of such commingled products is covered by the scope of these investigations. Acetone that has been commingled with acetone from sources not subject to these investigations is included within the scope, regardless of whether the combining occurs in third countries. The acetone component from sources not subject to these investigations may still be subject to other acetone investigations.
>
> The Chemical Abstracts Service (CAS) registry number for acetone is 67–64–1.

(…Continued)
Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

> The merchandise covered by these investigations is currently classifiable under Harmonized Tariff Schedule of the United States (HTSUS) subheadings 2914.11.1000 and 2914.11.5000. Acetone and acetone combinations and mixtures covered by these investigations may also enter under different HTSUS subheadings, such as 2902.20.0000, 2902.70.0000, 2905.12.0050, or 2914.12.0000, however, this list of HTSUS subheadings is non-exhaustive. Although these HTSUS subheadings and CAS registry number are provided for convenience and customs purposes, the written description of the scope of these investigations is dispositive.[17]

Acetone, the simplest ketone, is also known as dimethyl ketone, propan-2-one, or 2-propanone, among other names; it is an organic chemical with the formula $(CH_3)_2CO$. Acetone is used both as a chemical intermediate in the production of other chemicals and as a solvent.[18] The above scope language covers the acetone component when commingled with other chemicals. However, the record does not indicate that any imports of acetone have entered under the blended chemical HTS categories during the POI.[19]

A. Arguments of the Parties

1. Petitioner

Petitioner. Petitioner argues that the Commission should define a single domestic like product that is coextensive with the scope of these investigations. It contends that all acetone shares the same chemical formula, physical characteristics and uses, and that 98 percent of acetone is the interchangeable standard/technical grade of acetone. Petitioner contends that the other domestic like product factors also support finding all acetone to be a single domestic like product.[20] Petitioner maintains that Sasol's product is no different from domestically produced acetone, and also disagrees with the contention that the manufacturing process determines the purity of the acetone or its contamination with benzene.[21]

Respondents. Sasol argues that benzene-free acetone is not simply a specialty grade and should be a separate domestic like product.[22] Sasol maintains that acetone produced by the cumene production process contains some benzene, a known human carcinogen, while

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[17] *Acetone from Belgium, the Republic of Korea, the Kingdom of Saudi Arabia, Singapore, the Republic of South Africa, and Spain: Initiation of Less-Than-Fair-Value Investigations*, 84 FR 9755, 9760-61 (March 18, 2019).

[18] CR at I-3, I-9, PR at I-7.

[19] *See* CR at I-8, PR at I-6.

[20] Petitioner's Brief, Answers to Staff Questions, at 2-3, 5-6.

[21] Petitioner's Brief, Answers to Staff Questions, at 24-26.

[22] *See* Conf. Tr. at 191 (Grimson). Sasol argues that its product's benzene is measured in parts per billion. *See* Sasol's Brief at 7.

acetone produced by other production processes such as the one it uses in South Africa and that is used by Dow DuPont ("Dow") in its domestic production contain no benzene whatsoever.[23] It claims the two types of acetone are not interchangeable because customers requiring benzene-free acetone cannot replace it with the acetone produced by the cumene process.[24]

B. Analysis and Recommendation

We consider below whether the Commission should define specialty grades of acetone or benzene-free acetone (claimed to be produced by Dow) to be separate domestic like products. We note that there is limited information in the record, particularly with respect to the acetone produced by Dow.[25] Based on the record in the preliminary phase of these investigations, we define a single domestic like product consisting of acetone coextensive with the scope of the investigations.

In defining the domestic like product, the analysis focuses on whether there are clear dividing lines between articles produced domestically.[26] Our analysis below therefore focuses on similarities between standard acetone produced domestically and higher purity grades or products produced domestically, rather than between the imported merchandise Sasol produces and domestic products.[27]

Physical Characteristics and Uses. Acetone is a clear, colorless, flammable liquid with a fragrant, sweetish odor.[28] All grades of acetone share the same chemical formula.[29] The vast majority of acetone sold in the U.S. market is standard/technical grade.

Higher-purity grades of acetone (NF and low water) are specialty grades that contain less water and/or benzene but otherwise have specifications identical to standard/technical grade acetone.[30] Of the six reporting domestic producers, only *** of acetone during the POI.[31]

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[23] The Petition states that Dow produces acetone from isopropyl alcohol. This process, according to Sasol, produces benzene-free acetone because it is not produced from cumene which contains benzene. *See* Petition at 9; Sasol's Brief at 2-3.

[24] Sasol's Brief at 2-3, 9-11.

[25] CR/PR at III-1 n.1. Dow ***. CR at Table III-4 n.1, PR at III-1 n1; Email of Lisa Schroeter of Dow (March 22, 2019).

[26] *Torrington Co. v. United States,* 747 F. Supp. 744, 749 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *Certain Structural Steel Beams from China, Germany, Italy, Luxembourg, Russia, South Africa, Spain, and Taiwan*, Inv. Nos. 731-TA-935-942 (Preliminary), USITC Pub. 3438 (July 2001) at 5, n. 15 ("Hoesch's information regarding practices in Germany is not relevant to the Commission's definition of the U.S.-produced product.").

[27] The higher purity products produced domestically include ***. Conf. Tr. at 26 (Sanders). Dow ***. Email of Lisa Schroeter of Dow (March 22, 2019).

[28] CR at I-9, PR at I-7; Petitioner's Brief at Exhibit 16.

[29] CR at I-9, PR at I-7; Petitioner's Brief at Exhibit 16.

[30] *See* Petitioner's Brief at Exhibit 16.

[31] *See* CR at II-2 n.5, PR at II-1 n.5. *** to the Commission. CR/PR at III-1.

Its NF product contains only 2 parts per million ("ppm") of benzene.[32] AdvanSix's low water acetone contains 0.3 percent water by weight, as compared to 0.5 percent water for its standard/technical grade.[33]

The record concerning Dow's acetone product is more limited, and the purity level of Dow's product is unknown. Dow provided a producer questionnaire to the Commission late in these proceedings with minimal information.[34] The Commission therefore does not have evidence regarding the benzene content of Dow's domestically produced acetone with which to assess Sasol's argument that Dow's acetone is a distinct benzene-free product.

With respect to uses, acetone is used as a solvent and intermediate chemical in the production of downstream chemicals methyl methacrylate ("MMA") and Bisphenol A ("BPA"). These chemicals are in turn used in the production of acrylics, plastics, and resins. Acetone is also typically the main ingredient in nail polish remover.[35] AdvanSix's specialty grades of acetone are used in pharmaceutical production.[36] Dow uses its acetone to ***.[37]

Manufacturing Facilities, Production Processes, and Employees. The record concerning this factor is limited. All domestic producers that provided questionnaires to the Commission use cumene peroxidation to produce acetone.[38] The record indicates that testing and certification of specialty acetone can be done at the production facility or after the product has been delivered to a purchaser.[39] Dow uses a completely different process, IPA hydrogenation, to produce its acetone.[40]

Channels of Distribution. Domestically produced acetone is generally sold to end users.[41] There is no information in the record specific to specialty grades, other than that certain customers require higher-purity acetone.[42] All ***.[43]

Interchangeability. The record indicates some interchangeability between specialty grades and standard/technical grade. Specialty grades of acetone can be used in the same applications as standard/technical grade, but technical grades cannot be used in specialty applications, *i.e.,* interchangeability is only in one direction.[44] Dow purchases acetone, and also produces *** of acetone, but it is unclear to what extent it uses the acetone interchangeably.

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[32] *See* Petitioner's Brief at Exhibit 16. It is unclear what level of benzene is present in technical grade acetone.

[33] Petitioner's Brief at Exhibit 16.

[34] Dow initially ***. *See* CR at III-1 n.1; Email of Lisa Schroeter of Dow (March 22, 2019). Dow is also one of the largest purchasers of acetone and provided a Lost Sale/Lost Revenue questionnaire. *See* CR/PR at Table V-9.

[35] CR at I-9, II-1, PR at I-3, II-1; Conf. Tr. at 23 (Sanders).

[36] Petitioner's Brief, Answer to Staff's Questions at 7.

[37] Email of Lisa Schroeter of Dow (March 22, 2019).

[38] CR/PR at V-1 n.1.

[39] Petition at 5.

[40] Petition at 7.

[41] CR/PR at II-1.

[42] *See* Conf. Tr. at 26 (Sanders).

[43] Email of Lisa Schroeter of Dow (March 22, 2019). Its ***.

[44] Petitioner's Brief, Answers to Questions at 3.

Producer and Customer Perceptions. Petitioner indicates that producers and customers perceive acetone to be a single commodity product.[45] There is limited information concerning Dow's product.[46] While Sasol contends that purchasers perceive there to be a "benzene-free" acetone product, purchasers did not cite benzene contamination as a consideration when purchasing acetone.[47]

Price. Specialty grades tend to be priced higher than standard/technical grade.[48] ***.[49]

Conclusion. We define a single domestic like product including all acetone for purposes of the preliminary phase of the investigations. The Commission has frequently stated that it "normally does not find separate like products based on different grades of chemicals or mineral products."[50]

The record does not indicate any clear dividing lines between higher purity grades of acetone or benzene-free acetone and standard/technical grade acetone. Apart from the asserted difference in contaminant levels, there is no information in the record about any other differences in physical characteristics between technical grade and specialty grades of acetone. Standard/technical grade and specialty grades appear to have only minimal differences, and in any event, the specialty grades are a niche product, constituting a very small portion of the overall acetone market.[51]

Moreover, both standard/technical grade and the specialty grades of acetone are used to produce downstream products, and technical grade acetone and specialty grades of acetone can be produced at the same facility with the same employees.[52] The record does not indicate significant distinctions in channels of distribution or with respect to producers' and customers' perceptions, though AdvanSix' specialty grades have different end users and are priced higher.[53]

With respect to the possibility of defining a separate benzene-free acetone product, there is little in the record that supports Sasol's assertion that a separate market exists for

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[45] Petitioner's Brief, Answers to Questions at 5.

[46] *See* CR/PR at III-1 n.1

[47] Supply and price were the top two purchasing factors identified by purchasers. CR at II-17.

[48] Petitioner's Brief, Answers to Questions at 6.

[49] Email of Lisa Schroeter of Dow (March 22, 2019).

[50] *See, e.g., Sodium Nitrite from China and Germany*, Inv. Nos. 701-TA-453 and 731-TA-1167 (Final), USITC Pub. 4029 at 7 n.34 (Aug. 2008); *Citric Acid and Certain Citrate Salts from Canada and China,* Inv. Nos. 701-TA-456 and 731-TA-1151-1152 (Preliminary), USITC Pub. 4008 at 7 n.26 (June 2008); *Liquid Sulfur Dioxide from Canada*, Inv. No. 731-TA-1098 (Preliminary), USITC Pub. 3826 at 6 (Dec. 2005).

The legislative history also indicates that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other …" S. Rep. No. 96-249 at 90-91 (1979).

[51] CR at II-2 n.2, PR at II-1 n.2; Conf Tr. at 65 (Sanders) (specialty grades are two percent of total market).

[52] CR/PR at II-1; Conf Tr. at 26 (Sanders).

[53] Conf. Tr. at 26 (Sanders).

benzene-free acetone as neither Dow nor apparently Sasol market their acetone as benzene-free.[54] In the absence of evidence that the distinction Sasol cites is recognized by other market participants, we see no basis for defining benzene-free acetone as a distinct domestic like product.

For the above reasons, for purposes of the preliminary phase of these investigations, we define a single domestic like product consisting of all acetone coextensive with the scope.[55]

IV. Domestic Industry and Related Parties

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[56] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We consider whether any producer of the domestic like product should be excluded from the domestic industry pursuant to Section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[57] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[58]

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[54] As noted by petitioner, Sasol does not market its product as benzene-free and its *** manufacturers, which similarly buy standard/technical grade acetone. Petitioner's Brief, Answers to Questions at 24-26.

[55] If parties intend to pursue any domestic like product arguments in any final phase of these investigations, they should provide in their comments on the Commission's draft questionnaires a particularized discussion of the proposed products and appropriate data collection.

[56] 19 U.S.C. § 1677(4)(A).

[57] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd mem.*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.,* 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[58] 19 U.S.C. § 1677(4)(B). The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); *see also Torrington Co. v. United States*, 790 F. Supp. at 1168.

A. Arguments of the Parties

Petitioner. Petitioner contends that INEOS Americas should be excluded from the definition of the domestic industry as a related party. According to petitioner, INEOS Americas' interest is increasingly in importation at the expense of its domestic production. It also asserts that its data are inconsistent with the data reported by other U.S. producers because ***.[59]

Respondents. INEOS argues that INEOS Americas does not act differently from non-related domestic producers and should not be excluded as a related party. INEOS notes that INEOS Americas is the largest U.S. producer of acetone, accounting for a third of domestic production, operated at very *** and meet its contractual sales obligations. According to INEOS, INEOS Americas' superior performance was not a result of its relationship with the subject producer in Belgium.[60]

B. Analysis

INEOS Americas was the largest domestic producer of acetone in 2018, accounting for *** percent of domestic production.[61] It imported acetone from Belgium during the POI and shares common ownership with INEOS Europe, an exporter of subject merchandise.[62] Thus, INEOS Americas is a related party.[63] INEOS Americas ***.[64]

INEOS Americas' imports of subject merchandise *** but the ratio of its subject imports to domestic production never exceeded *** percent.[65] Further, INEOS Americas' capacity utilization increased from *** percent in 2016 to *** percent in 2018, lending support to its statement that it needed to supplement its domestic production by importing.[66] It also ***.[67]

We find that the ***. Moreover, despite petitioner's claims, its performance during 2016-2017 was ***.[68] Given that it has a demonstrated interest in domestic production and a reasonable explanation for importing acetone from Belgium, we find appropriate circumstances do not exist to exclude INEOS Americas from the domestic industry as a related party.

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[59] Petitioner's Brief at 5-8.

[60] INEOS's Brief at 4-6.

[61] CR/PR at Table III-1. INEOS Americas produced *** short tons of acetone in 2016, *** short tons in 2017, and *** short tons in 2018. CR/PR at Table III-8.

[62] INEOS Americas U.S. Producer Questionnaire at II-12; INEOS's Brief at 2-3. *See* 19 U.S.C. § 1677(4)(B)(ii)(III).

[63] CR/PR at Table III-8. As noted, INEOS stated that it imported subject merchandise ***. *Id.*

[64] ***.

[65] *See* CR/PR at Table III-8. INEOS Americas imported *** short tons of acetone from Belgium in 2016 (the equivalent of *** percent of its domestic production), *** short tons of acetone from Belgium in 2017 (the equivalent of *** percent of its domestic production), and *** short tons of acetone from Belgium in 2018 (the equivalent of *** percent of its domestic production). *Id.*

[66] CR/PR at Table III-4. INEOS Americas' capital expenditures ***. *See* CR/PR at Table VI-5.

[67] *See* CR/PR at Table III-9. It purchased *** short tons from domestic producers in 2016, *** short tons in 2017, and *** short tons in 2018. *Id.* INEOS explained these ***.

[68] *See* CR/PR at Table C-2 & Table VI-3. INEOS Americas' operating income to net sales ratio was ***. *Id.* INEOS Americas also provided corrected pricing data. CR at V-10 n.21, PR at V-6 n.21.

We consequently define the domestic industry to include all domestic producers of acetone.

V. Negligibility

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than three percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible.[69] The statute further provides that subject imports from a single country which comprise less than 3 percent of total such imports of the product may not be considered negligible if there are several countries subject to investigation with negligible imports and the sum of such imports from all those countries collectively accounts for more than 7 percent of the volume of all such merchandise imported into the United States.[70]

Additionally, even if subject imports are found to be negligible for purposes of present material injury, they shall not be treated as negligible for purposes of a threat analysis should the Commission determine that there is a potential that subject imports from the country concerned will imminently account for more than three percent of all such merchandise imported into the United States.[71] In evaluating subject imports' potential to imminently exceed the negligibility threshold, the Commission examines whether exceeding the threshold is likely to occur.[72]

A. Arguments of the Parties

1. Petitioner

Petitioner contends that the Commission should not terminate any of the investigations based on negligibility. It asserts that subject imports from Saudi Arabia were 4.7 percent of

[69] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

[70] 19 U.S.C. § 1677(24)(A)(ii).

[71] 19 U.S.C. § 1677(24)(A)(iv).

[72] *See Cold-Rolled Steel Flat Products from Brazil, China, India, Japan, Korea, Netherlands, Russia, and the United Kingdom,* Inv. Nos. 701-TA-540-544 and 731-TA-1283-1290 (Preliminary) USITC Pub. 4564 at 15 (Sept. 2015) ("{S}ubject imports from the Netherlands are not likely to surpass the three percent negligibility threshold in the imminent future."); *Polyvinyl Alcohol From China, Germany, Japan, Korea, and Singapore*, Inv. Nos. 731-TA-1014-1018, (Preliminary) USITC Pub 3553 at 12 (Oct. 2002) ("We do not find that this possibility outweighs the other information described above that indicates that imports from Singapore are not likely to imminently exceed the three-percent threshold.").

total imports of acetone for the period of December 2017 - November 2018, the period of data available to petitioner when it filed the petitions on February 19, 2019.[73]

Further, petitioner submits that, even if the Commission finds that subject imports from Saudi Arabia are negligible for purposes of present material injury, they have the potential to imminently account for more than 3 percent of total imports, and such imports should be considered for purposes of threat of material injury.[74] Petitioner contends that importers have already demonstrated their ability to rapidly increase imports from Saudi Arabia in a very short amount of time, and that Petro Rabigh's owner, Sumitomo, has been actively seeking to place orders for acetone from Saudi Arabia in late 2018 and early 2019.[75]

2. Respondents

Sasol argues that the Commission should include the imports entering under additional HTS numbers 2902.20.00.00, 2902.70.00.00, 2905.12.00.50, or 2914.12.00.00 (covering acetone blended with other chemicals) when calculating the total volume of imports for negligibility. Sasol notes that the scope language defining the subject merchandise specifically includes acetone blended with other chemicals.[76] It argues that including the additional HTS numbers results in imports from South Africa (along with several other subject countries) falling below the 3 percent threshold.[77]

Saudi Producers argue that subject imports from Saudi Arabia were below 3 percent during the pertinent time period and are unlikely to exceed 3 percent, and therefore, the Commission should find them negligible both for purposes of present material injury and threat of material injury.[78] Saudi Producers assert that the monthly import trends indicate no likelihood that subject imports from Saudi Arabia will imminently exceed 3 percent because they were only imported during three months of the POI when the only Saudi exporter, Petro Rabigh, shipped acetone into the U.S. market. They argue that the import totals declined in the three months during which the imports were present (December 2017, April 2018, and September 2018) and only were imported in response to supply shocks in the United States.[79]

B. Analysis

We examine whether subject imports from any of the subject countries are negligible. As we explain below, we find that subject imports from Saudi Arabia are negligible and terminate the investigation with respect to such imports.

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[73] Petitioner's Brief at 21-22. The most recent 12-month period (for which data are available to the Commission) that precedes the filing of the petition pursuant to statute is February 2018-January 2019. 19 U.S.C. § 1677(24)(A)(i); CR at IV-6.

[74] Petitioner's Brief at 21-22.

[75] Petitioner's Brief at 22.

[76] Sasol's Brief at 14-17.

[77] Sasol's Brief at 14-17.

[78] Saudi Producers' Brief at 1-2.

[79] Saudi Producers' Brief at 18-19.

At the outset, we have based total import volumes on HTS numbers that include acetone only, and not included imports entering under the four HTS categories that include imports of acetone blended with other chemicals.[80] We adopt this approach because the additional four HTS categories contain chemicals other than acetone, whereas the scope only includes the acetone component if blended with other chemicals.[81] Including these additional HTS categories would result in nonsubject merchandise being included in our calculation of total acetone import volumes. Accordingly, we find no merit in Sasol's argument that imports entering under the HTS categories covering blends should be included in the calculation of total imports of acetone.

The record indicates that imports from five of the subject countries are above the pertinent negligibility thresholds. For the most recent 12-month period for which data are available preceding the filing of the petition (February 2018- January 2019, subject imports from Belgium accounted for 28.1 percent of total acetone imports, subject imports from Korea accounted for 37.7 percent, subject imports from Singapore accounted for 3.9 percent, subject imports from South Africa accounted for 11.7 percent, and subject imports from Spain accounted for 12.7 percent.[82]

Subject imports from Saudi Arabia, however, were under the negligibility threshold, accounting for 2.8 percent of total acetone imports over the applicable 12-month period prior to filing of the petition.[83] In these preliminary investigations, we also must consider whether there is a likelihood that evidence leading to a contrary result will arise in any final phase of these investigations. The import data are based on official import statistics and the Commission is unlikely to receive any additional or different information in any final phase of the investigations concerning the quantity of subject imports from Saudi Arabia (the numerator in the negligibility calculation). Because the available data are complete, the calculation of subject import volume from Saudi Arabia during the relevant 12-month time period (February 2018-January 2019) is unlikely to change to any meaningful extent in any final phase of these investigations.

As to the total quantity of imports during the pertinent time period (the denominator in the negligibility calculation), it appears unlikely that it would change such that subject imports from Saudi Arabia would exceed the 3 percent negligibly threshold. Adjustments to the volume of total imports contained in table IV-3 (official import data) for the relevant time period may occur in any final phase of these investigations to the extent that the Commission receives additional information from importers that permit it to further adjust the official import data. Any such adjustments are likely to increase rather than decrease total import volume – and

[80] *See* CR at I-8 n.14, PR at I-6 n.14. The scope language indicates that the HTS numbers are provided for convenience and customs purposes and the written description of the scope (and not HTS numbers) is dispositive. CR at I-8, PR at I-6.

[81] The negligibility provision of the statute allows the Commission to make "reasonable estimates on the basis of available statistics" of pertinent import levels for purposes of making negligibility determinations. 19 U.S.C. § 1677(24)(C).

[82] CR/PR at Table IV-3.

[83] CR/PR at Table IV-3.

therefore likely to decrease rather than increase the ratio of subject imports from Saudi Arabia to total imports. This is because further questionnaire responses are likely to report additional quantities of acetone that are within the scope definition but are not currently included in table IV-3 because they did not enter under the two HTS numbers used to calculate total imports of acetone.[84] Accordingly, we find that the data in any final phase of these investigations are unlikely to change so that subject imports from Saudi Arabia would reach the 3 percent threshold.

We also consider whether there is a potential that subject imports from Saudi Arabia will imminently account for 3 percent and thus be considered for purposes of threat of material injury. Subject imports from Saudi Arabia were sporadic during the POI, entering during only three months, and the amounts entering declined. Subject imports from Saudi Arabia were 5,550 short tons during December 2017, 4,522 short tons in April 2018, and 2,224 short tons in September 2018.[85]

Only ***, exported to the United States during the POI.[86] Information reported by this producer indicated that it only ***.[87] It operated at *** percent capacity utilization in 2018 and reported inventories at the end of 2018 equivalent to *** percent of its total shipments.[88] Its excess capacity was *** short tons in 2018.[89] Petro Rabigh ***.[90] Notwithstanding Petro Rabigh's excess capacity and projections of increased production and exports, subject imports from Saudi Arabia during 2018 were limited and declined in volume during the three months they were present. Moreover, in contrast to the record with respect to each of the other five subject countries, there were no reported arranged imports of acetone from Saudi Arabia for 2019.[91] We therefore find that subject imports from Saudi Arabia are not likely to imminently exceed the 3 percent threshold for negligibility.

In sum, imports of acetone from Saudi Arabia are below the negligibility threshold, and the record does not indicate a potential that they will imminently exceed the 3 percent threshold. Additionally, there is no likelihood that evidence leading to a contrary result will arise in any final phase of these investigations. Accordingly, we find that imports from Saudi Arabia are negligible and terminate the investigation with respect to such imports.

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[84] *See* CR/PR at Table IV-3. The record indicates that no acetone from Saudi Arabia entered under the other HTS numbers during the applicable 12-month period. *See, e.g.,* Saudi Producers' Brief at Exhibits 6 & 7.

[85] See CR/PR at Table IV-10.

[86] CR/PR at Table VII-11.

[87] Foreign Producer Questionnaire at II-2a.

[88] Foreign Producer Questionnaire at II-8.

[89] Foreign Producer Questionnaire at II-8.

[90] Foreign Producer Questionnaire at II-8.

[91] CR/PR at Table VII-32. Petitioner argues that ***. Petitioner's Brief at 23 & Exhibit 10, Attachment 6. There is no indication in the record that these sales efforts in August 2018 resulted in any sales of subject imports from Saudi Arabia in the United States.

VI. Cumulation

A. In General

For purposes of evaluating the volume and price effects for a determination of reasonable indication of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

(1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;

(2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;

(3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and

(4) whether the subject imports are simultaneously present in the market.[92]

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the subject imports compete with each other and with the domestic like product.[93] Only a "reasonable overlap" of competition is required.[94]

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[92] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-80 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), *aff'd*, 859 F.2d 915 (Fed. Cir. 1988).

[93] *See*, *e.g.*, *Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[94] The Statement of Administrative Action ("SAA") to the Uruguay Round Agreements Act ("URAA"), expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy*, 678 F. Supp. at 902); *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

A. Arguments of the Parties

Petitioner's Arguments. Petitioner argues that there is a reasonable overlap of competition because subject imports compete directly with each other and with the domestic like product. Petitioner asserts that acetone is a commodity product and acetone from different sources is fungible. It claims that domestically produced acetone and subject imports compete in the same geographic markets and are sold through the same channels of distribution – either to distributors or to end users – and that subject imports were present in the U.S. market during the POI.[95] It disputes Sasol's contention that the acetone it produces by a different production process competes differently or is sold to different customers than other acetone in the U.S. market.[96]

Respondents' Arguments. INEOS argues that subject imports from Belgium should not be cumulated because they compete through a different channel of distribution than imports from the other subject countries. INEOS contends that its imports are almost never sold in the spot market and are never sold to distributors unlike other subject imports that are stored in tanks, and subsequently resold after importation.[97]

B. Analysis

As discussed above, we have found that imports are negligible in the antidumping duty investigation involving subject imports from Saudi Arabia and terminated that investigation. Consequently, these imports are ineligible for cumulation.[98]

The threshold criterion for cumulation is satisfied because petitioner filed the antidumping duty petitions with respect to subject imports from Belgium, Korea, Singapore South Africa, and Spain on the same day, February 19, 2019.[99] We thus examine whether there is a reasonable overlap of competition between subject imports from Belgium, Korea, Singapore, South Africa, and Spain and between subject imports from each source and the domestic like product.

Fungibility. The vast majority of acetone sold in the U.S. market is produced and marketed as standard/technical grade acetone though there is no uniform standard that defines the grade.[100] During the POI, only a small portion of the domestic product and subject imports were sold as a specialty product.[101] Petitioner and respondents have both indicated that standard/technical grade acetone is a commodity chemical product.[102] Thus, there

[95] Petitioner's Brief at 23-25.

[96] Petitioner's Brief at 25-26.

[97] INEOS' Brief at 7-8.

[98] 19 U.S.C. § 1677(7)(G)(ii)(II).

[99] CR/PR at I-1.

[100] CR at I-9, II-2, PR at II-1, I-7; Conf. Tr. at 25-26, 57 (Sanders) (ninety-eight percent is technical/standard grade). Only about 2 percent of acetone sold in the United States were specialty grades such as NF or low water acetone. *Id.* at 26.

[101] *See* CR/PR at Table IV-5.

[102] Conf. Tr. at 26 (Sanders), 116 (Bhatia), 119 (Castro), 151 (Dougan), 198 (Connolly).

appears to be a high degree of substitutability between domestically produced acetone and acetone imported from subject sources.[103]

Market participants' questionnaire responses also indicate that acetone from domestic and subject sources is used interchangeably. When comparing the domestic product to the subject imports from each country, a majority of responding U.S. producers and at least half of all importers reported that the domestic product and imports from each subject source are "always" used interchangeably.[104]

For comparisons between imports from different subject sources, all responding U.S. producers indicated that acetone from each subject source was "always" used interchangeably.[105] A majority of importers also indicated that acetone from each subject source was "always" or "frequently" used interchangeably.[106] In no instances when comparing the domestic product or acetone from subject sources did any U.S. producer or importer report that the acetone was "never" interchangeable.[107]

Most U.S. producers reported that there were "never" significant differences other than price between all country pairs and between subject imports and domestic acetone.[108] Importers, on the other hand, reported that there were "always" or "frequently" significant differences other than price between all country pairs and between subject imports and domestic acetone.[109] Notwithstanding importers' reports of significant non-price differences, the record indicates that there is a sufficient degree of fungibility among the subject imports and the domestic like product for purposes of finding a reasonable overlap of competition.

Channels of Distribution. Subject imports and the domestic like product shared the same general channels of distribution. During the period of investigation, domestic producers and importers of subject imports from Belgium, Singapore, and South Africa sold acetone

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[103] *See* CR at II-17, PR at II-10.

[104] *See* CR/PR at Table II-5.

[105] *See* CR/PR at Table II-5.

[106] *See* CR/PR at Table II-5.

[107] *See* CR/PR at Table II-5. While Sasol does not argue against cumulation of subject imports from South Africa for purposes of material injury, Sasol argues that its product is different from acetone in the U.S. market produced from cumene because its product is benzene-free, and its benzene-free acetone does not compete with acetone from other sources. Sasol's Brief at 19, Exhibit 1 at 4-5. Sasol concedes, however, that its product is interchangeable with technical grade acetone for customers who do not require benzene-free acetone. Sasol's Brief at 11 (noting "one way" interchangeability). Moreover, Sasol acknowledges the demand for its benzene-free product is limited. Sasol stated that it has a ***." *Id.* at 5. Sasol's largest customers also do not appear ***. As noted above, it sells to *** manufacturers.

[108] *See* CR/PR at Table II-6.

[109] *See* CR/PR at Table II-6. Subject imports from Belgium were an exception; most importers reported that there were "never" significant differences other than price between subject imports from Belgium and the domestic product. *Id.*

primarily to end users.[110] Importers of subject imports from Korea and Spain sold to both end users and distributors.[111]

INEOS argues that subject imports from Belgium are sold through a unique channel of distribution because they are sold to end users through contracts and not on the spot market.[112] However, a majority of all subject imports are sold directly to end users through contracts and not on the spot market.[113] INEOS's customer base also does not appear ***.[114] The record therefore does not support INEOS's argument concerning a unique channel of distribution for subject imports from Belgium.

Geographic Overlap. U.S. producers reported selling acetone to all regions of the contiguous United States.[115] Subject imports were also sold in all regions of the United States.[116] Imports from each subject country except *** were sold to the Central Southwest region.[117] Subject imports from *** were only sold in one region but it was the Central Southwest where imports from three other subject countries were also sold.[118]

Simultaneous Presence in Market. Subject imports from South Africa were present in the U.S. market in 35 of 36 months of the POI, January 2016-December 2018.[119] Subject imports from Korea were present in 31 months; subject imports from Belgium were present in 29 months; subject imports from Spain were present in 15 months; subject imports from Singapore were present in 8 months.[120]

Conclusion. The record supports finding that subject imports from the five subject countries are fungible with the domestic like product and each other, and that subject imports from each subject country and the domestic like product are sold in similar channels of distribution, in similar geographic markets, and have been simultaneously present in the U.S. market. In light of the foregoing, we find that there is a reasonable overlap of competition between the domestic like product and imports from each subject country and between imports from each subject country. Accordingly, we cumulate subject imports from Belgium, Korea, Singapore, South Africa, and Spain for our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

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[110] *See* CR/PR at Table II-1.

[111] *See* CR/PR at Table II-1.

[112] INEOS's Brief at 8.

[113] CR/PR at Tables II-1, V-2.

[114] *See* ***. At least four of these purchasers ***, suggesting INEOS's product is competing with other acetone in the U.S. market. CR/PR at Table V-9. As discussed earlier with respect to its related party status, INEOS supplies its customers with its domestic production, ***.

[115] CR/PR at Table II-2.

[116] CR/PR at Table II-2.

[117] CR/PR at Table II-2.

[118] CR/PR at Table II-2.

[119] CR/PR at Table IV-8.

[120] CR/PR at Table IV-8.

VII. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[121] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[122] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[123] In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[124] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[125]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured by reason of" unfairly traded imports,[126] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[127] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[128]

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[121] 19 U.S.C. §§ 1671b(a), 1673b(a).

[122] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... {a}nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[123] 19 U.S.C. § 1677(7)(A).

[124] 19 U.S.C. § 1677(7)(C)(iii).

[125] 19 U.S.C. § 1677(7)(C)(iii).

[126] 19 U.S.C. §§ 1671b(a), 1673b(a).

[127] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[128] The Federal Circuit, in addressing the causation standard of the statute, has observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was re-affirmed in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), in which the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to

(Continued…)

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[129] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[130] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[131] It is

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(…Continued)
material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[129] Uruguay Round Agreements Act Statement of Administrative Action (SAA), H.R. Rep. 103-316, Vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "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"); *accord Mittal Steel*, 542 F.3d at 877.

[130] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n* , 266 F.3d at 1345. ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[131] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

clear that the existence of injury caused by other factors does not compel a negative determination.[132]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[133] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[134]

The Federal Circuit's decisions in *Gerald Metals*, *Bratsk,* and *Mittal Steel* all involved cases in which the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[135] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record 'to show that the harm occurred 'by reason of' the LTFV imports,'" and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[136] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

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[132] *See Nippon*, 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[133] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[134] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[135] *Mittal Steel*, 542 F.3d at 875-79.

[136] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

The progression of *Gerald Metals*, *Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[137]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[138] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[139]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

1. Demand Conditions

Demand for acetone depends on demand for the downstream products in which it is used. Acetone is used as a solvent and to produce downstream chemicals.[140] Production of MMA is the largest end use of acetone in the United States, accounting for *** percent of apparent U.S. consumption of acetone in 2017, followed by use as a solvent (*** percent), and production of BPA (*** percent).[141] There is a small specialty market for NF and low water

[137] To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in the final phase of investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on capacity, production, and shipments of the product under investigation in the major source countries that export to the United States. The Commission plans to continue utilizing published or requested information in the final phase of investigations in which there are substantial levels of nonsubject imports.

[138] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[139] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp.*, 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[140] CR/PR at II-1.

[141] CR/PR at II-1. MMA is typically used to produce acrylic sheet and molding, which is used in construction, transportation, and medical devices. BPA is used to produce polycarbonate resins used in optical media, electrical and electronic uses, and the automotive sector. Acetone is widely used as the solvent in nail polish remover, cement, lacquer and finishers, cleaners, paint, coatings, films and adhesives, pharmaceuticals, and household and personal care products. CR/PR at II-1.

acetone for production of pharmaceuticals.[142] Approximately *** percent of sales in the U.S. market are specialty acetone.[143]

Most domestic producers and importers reported that demand for acetone in the United States had increased over the POI.[144] Apparent U.S. consumption increased from 1.19 million short tons in 2016 to 1.24 million short tons in 2017, and 1.34 million short tons in 2018, an overall increase of 12.7 percent.[145]

2. Supply Conditions

The domestic industry was the main source of supply to the U.S. market during the POI. The domestic industry's market share was *** percent of apparent U.S. consumption in 2016, *** percent in 2017, and *** in 2018.[146] Subject imports were the next largest source of acetone in the U.S. market. Cumulated subject imports' share of apparent U.S. consumption was *** percent in 2016, *** percent in 2017, and *** percent in 2018.[147] Nonsubject imports accounted for *** percent of apparent U.S. consumption in 2016, *** percent in 2017 and *** percent in 2018.[148]

The cumene peroxidation process is used to make the vast majority of acetone produced worldwide.[149] The process is capital intensive, with high fixed costs; a new greenfield facility is estimated to cost approximately $500 million.[150] Production is therefore most efficient when production lines operate continuously with little downtime.[151]

The cumene process produces acetone and phenol as co-products; one pound of phenol is produced for every 0.61 pounds of acetone.[152] Because phenol is the predominant output of the cumene process and sells for a higher price than acetone, respondents contend that the phenol market drives production decisions by the domestic industry.[153] Petitioner asserts that producers consider both the acetone and phenol markets when deciding on production levels.[154] In any final phase of these investigations, we will further examine the extent to which acetone production decisions are impacted by trends in the phenol market.

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[142] *See* CR/PR at Table IV-5.

[143] *See* CR/PR at Table IV-5; CR at I-10; PR at I-7; Conf. Tr. at 26 (Sanders).

[144] CR/PR at Table II-4.

[145] CR/PR at Table IV-11, CR at C-1; PR at I-1.

[146] CR/PR at Table IV-11.

[147] CR/PR at Table IV-11.

[148] CR/PR at Table IV-11 (including imports from Saudi Arabia).

[149] CR at I-11. As noted above, Sasol and Dow produce acetone with other processes that do not use cumene as a raw material. CR at I-11; PR at I-8.

[150] Conf. Tr. at 24 (Sanders).

[151] CR at II-6, II-6 n.8, PR at II-4, II-4 n.8; Conf. Tr. at 24 (Sanders).

[152] CR at III-5, PR at III-4.

[153] Joint Respondents' Brief at 8-9; Petitioner's Brief at Exhibit 17 (showing acetone and phenol prices).

[154] Petitioner's Brief at 15-17.

There were multiple events that affected acetone supply during the POI. Hurricane Harvey in August 2017 resulted in producers near the Gulf of Mexico shutting down production. Three U.S. producers (***), accounting for *** of reported domestic production in 2017, reported declaring *force majeure* because of Hurricane Harvey.[155] Producers placed customers on allocation, and the declared *force majeure* lasted approximately 4-6 weeks for ***.[156] Although Hurricane Harvey impacted the supply of acetone, petitioners state that it also reduced demand for acetone because the hurricane affected certain downstream users' facilities as well.[157]

In late 2017, Shell announced that in January 2018 it would be shutting down a production line in Deer Park, Texas with a publicly estimated 140,000 to 170,000 tons of capacity.[158] Shell shuttered the line later than expected in February 2018.[159] Respondents assert that these events (Hurricane Harvey, Shell's announcement, and Shell's delayed shutdown) resulted in subject imports being drawn into the U.S. market.[160] In any final phase of these investigations, we will further examine how these events affected supply conditions in the U.S. acetone market.

Four domestic producers, *** reported reducing their production of acetone due to market conditions during the POI, primarily during 2018.[161] Respondents contend that the oversupply of acetone in the U.S. market in 2018 stemmed from strong demand for phenol and Shell's unexpected continued production through February 2018.[162]

Most importers have their own storage tanks dedicated to acetone.[163] Storage tanks can be expensive to lease and maintain, and there can even be a limitation on production when inventories exceed storage capacity.[164] In any final phase of these investigations, we will further examine the impact of the cost and availability of storage tanks on production and prices of acetone.

3. Substitutability

The record in the preliminary phase of these investigations indicates that there is a high degree of substitutability between domestically produced acetone and acetone from subject sources.[165] All domestic producers reported that the domestic like product and subject imports were "always" or "frequently" interchangeable.[166] The majority of importers reported that the

[155] CR at II-9, PR at II-6.
[156] CR at II-9, II-10, PR at II-6.
[157] Conf. Tr. at 64 (Stephenson), 87 (Sanders).
[158] Conf. Tr. at 122 (Velarde), 130 (Frederic), 148 (Dougan).
[159] Conf. Tr. at 130 (Frederic).
[160] Joint Respondents' Brief at 11-13.
[161] *See* CR/PR at Table III-3.
[162] Joint Respondents' Brief at 13.
[163] CR at II-17, PR at II-11.
[164] CR at II-17, II-6 n.6, PR at II-11, II-4 n.6; Conf. Tr. at 178 (Haug).
[165] CR at II-17, PR at II-10.
[166] CR/PR at Table II-5.

domestic like product was "always" or "frequently" interchangeable with subject imports from each subject country and that subject imports from different sources were "always" or "frequently" interchangeable.[167]

We also find that price is an important factor in purchasing decisions for acetone. Purchasers identified availability as the most important factor in purchasing decisions and price as the second most important factor.[168] Purchasers listed price ahead of other factors such as quality, logistics, delivery, and maintaining multiple suppliers.[169] As noted above, most domestic producers reported that non-price differences were "never" significant in purchasing decisions for acetone.[170] Importers, on the other hand, reported that there were "always" or "frequently" significant differences other than price between all country pairs and between subject imports and domestically produced acetone.[171]

4. Other Conditions

The majority of domestic producers' and importers' sales of acetone are made under contracts directly to end users.[172] Benchmark prices of acetone are based on the contained propylene, specifically refinery grade propylene ("RGP").[173] Prices for most acetone sales in the U.S. market, both contract sales and spot sales, are based on a negotiated discount off the Large Buyer Price ("LBP"), an index published monthly. The LBP is negotiated between three purchasers that use acetone to produce MMA (Dow, Lucite, and Evonik) and two U.S. acetone producers (INEOS Americas and Shell); however, the LBP serves as a market benchmark rather than the actual price paid by the three large MMA purchasers.[174] The contract prices typically adjust monthly based on the LBP.[175]

Cumene, a chemical produced from benzene and propylene, is the raw material for acetone production in the cumene peroxidation process, which accounts for the vast majority of U.S. acetone production. Raw materials accounted for an increasing portion of domestic producers' production costs over the POI. Raw materials' share of the cost of goods sold

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[167] CR/PR at Table II-5.

[168] CR at II-18, PR at II-11.

[169] CR at II-18, PR at II-11.

[170] CR/PR at Table II-6, PR at II-11.

[171] *See* CR/PR at Table II-6. Subject imports from Belgium were an exception; most importers reported that there were "never" significant differences other than price between subject imports from Belgium and the domestic product. *Id.*

[172] CR/PR at Tables II-1, V-2.

[173] CR/PR at V-1.

[174] The LBP price negotiations between these three purchasers and two U.S. producers take into consideration raw materials, supply and demand, and market conditions in determining the agreed upon price to report to industry publications. CR at V-5 n. 12, PR at V-3 n. 12. Another method less often used for setting prices is the refinery grade propylene (RGP) plus an adder. Industry publications also publish other acetone pricing indices, such as a small buyer price, which are less commonly used to set acetone prices. CR at V-4-to V-5, PR at V-3.

[175] Conf. Tr. at 34-35 (Duhe).

("COGS") for U.S. production of acetone increased from 78.1 percent in 2016 to 85.0 percent in 2018.[176]

C. Volume of Cumulated Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[177]

Cumulated subject imports increased their presence in the U.S. market over the POI. Based on official import statistics,[178] subject imports increased from 97,811 short tons in 2016 to 147,786 short tons in 2017 and 240,860 short tons in 2018, a level 146.3 percent above that of 2016.[179] Cumulated subject imports' share of apparent U.S. consumption was *** percent in 2016, *** percent in 2017, and *** percent in 2018.[180]

In light of the foregoing, we find that the volume of cumulated subject imports, and the increase in volume, are significant in both absolute terms and relative to U.S. consumption.

D. Price Effects of the Cumulated Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of subject imports, the Commission shall consider whether –

(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and

(II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[181]

As addressed in section VII.B.3 above, we have found that there is a high degree of substitutability among subject imports and the domestically produced product and that price is an important consideration in purchasing decisions.

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[176] CR/PR at V-1.

[177] 19 U.S.C. § 1677(7)(C)(i).

[178] CR/PR at Table IV-2 (HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000). The Commission issued importer questionnaires to 21 firms in these investigations. These included firms identified in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS subheadings 2914.11.10 and 2914.11.50 in 2018. CR/PR at IV-1 n.1. Twelve importers provided usable questionnaire responses. CR at IV-1, IV-1 n.1; PR at IV-1, IV-1 n.1. Their data represent *** percent of subject imports and *** percent of all imported acetone. CR at I-5; PR at I-4.

[179] CR/PR at Tables IV-2, C-1.

[180] CR/PR at Tables IV-11. The domestic industry's market share was *** percent in 2016, *** percent in 2017, and *** percent in 2018. *Id.*

[181] 19 U.S.C. § 1677(7)(C)(ii).

The Commission collected quarterly data for the total quantity and f.o.b. value of four pricing products sold by contract and on the spot market to unrelated end users and distributors between January 2016 and December 2018.[182] Six U.S. producers and nine importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[183]

The price comparisons reflect mixed underselling and overselling. Cumulated subject imports consisting of 181,145 short tons undersold the domestic like product in 54 of 112 quarterly comparisons, at margins ranging from 0.3 percent to 38.8 percent.[184] Cumulated subject imports consisting of 183,489 short tons oversold the domestic like product in 58 of 112 quarterly comparisons, at margins up to 57.0 percent.[185] Additionally, six purchasers that responded to the preliminary phase lost sales/lost revenue survey reported that the subject imports were priced lower than the U.S. product, and five of these purchasers reported that the lower price of the subject imports was a primary reason for the decision to purchase subject imports rather than domestically produced product.[186] They reported purchasing *** short tons of subject imports instead of domestic product because of lower prices.[187]

We have also considered price trends for the domestic like product. During the POI, prices fluctuated but increased overall for all four domestically produced pricing products.[188] Consequently, we do not find that subject imports depressed domestic prices.

Although the domestic industry's prices and net sales values increased during the POI, the domestic industry's COGS as a ratio to net sales also increased, rising from *** percent in 2016 to *** percent in 2018.[189] The increase resulted from sharply rising raw material costs.

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[182] CR at V-9 to V-10, PR at V-5 to V-6.
The complete product descriptions are the following:

Product 1-- Standard grade acetone, sold in bulk to distributors, spot/short-term contract sales.

Product 2-- Standard grade acetone, sold in bulk to distributors, annual/long-term contract sales.

Product 3-- Standard grade acetone, sold in bulk to end users, spot/short-term contract sales.

Product 3-- Standard grade acetone, sold in bulk to end users, annual/long-term contract sales.

CR at V-9 to V-10, PR at V-6.

[183] CR at V-10, PR at V-6. Pricing data reported by these firms accounted for more than 99 percent of U.S. producers' reported commercial shipments and reported commercial shipments of imports from each subject country although importer questionnaires did not account for all imports from the subject countries. *Id;* CR at I-5, PR at I-3.

[184] CR/PR at Table V-8.

[185] CR/PR at Table V-8.

[186] CR at V-26, PR at V-16.

[187] CR/PR at Table V-10.

[188] CR/PR at Tables V-3 to V-6. During the POI, domestic prices increased by 12.9 percent for Product 1, 45.5 percent for Product 2, 41.0 percent for Product 3, and 60.6 percent for Product 4. CR/PR at Table V-7.

[189] CR/PR at Table VI-1.

The industry's raw material costs increased from $*** per ton in 2016 to $*** per ton in 2018, and the industry's unit COGS increased from $*** per ton in 2016 to $*** per ton in 2018.[190]

Thus, while the domestic industry was able to increase its prices, the price increases were insufficient for the industry to recover its increasing costs.[191] This cost-price squeeze occurred during a period of solidly growing demand in the U.S. market. Apparent U.S. consumption increased 8.4 percent from 2017 to 2018, and 12.7 percent over the entire POI.[192]

In light of the foregoing, we find for purposes of these preliminary determinations that increasing volumes of cumulated subject imports frequently undersold and suppressed to a significant degree prices for domestically produced acetone during the POI. We consequently conclude that the cumulated subject imports had significant adverse price effects. We will examine further the extent to which subject imports and raw material costs affected domestic prices for acetone in any final phase of these investigations.

E. Impact of the Cumulated Subject Imports[193]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[194]

The domestic industry's performance declined over the POI, notwithstanding the substantial increase in apparent U.S. consumption. The industry's production declined,[195] but its capacity utilization[196] increased overall due to its reductions in production capacity.[197] The

[190] CR/PR at Table VI-1.

[191] Five of the twenty responding purchasers also indicated that the domestic producers had reduced their prices to compete with subject imports. CR at V-26, PR at V-16.

[192] CR/PR at Table C-1.

[193] In its notice initiating antidumping duty investigations, Commerce reported estimated antidumping duty margins of 43.14 to 73.69 percent for Belgium, 112.72 to 174.66 percent for Korea, 14.52 to 131.75 percent for Singapore, 214.09 to 414.92 percent for South Africa, and 102.97 and 171.81 percent for Spain. *Acetone from Belgium, the Republic of Korea, the Kingdom of Saudi Arabia, Singapore, the Republic of South Africa, and Spain: Initiation of Less-Than-Fair-Value Investigations*, 84 FR 9755, 9759 (March 18, 2019).

[194] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[195] The industry's production increased from *** short tons in 2016 to *** short tons in 2017 and then decreased to *** short tons in 2018. CR/PR at Table III-4.

[196] The domestic industry's capacity utilization declined from *** percent in 2016 to *** percent in 2017 and then increased to *** percent in 2018. CR/PR at Table III-4.

[197] The domestic industry's capacity increased from *** short tons in 2016 to *** short tons in 2017, and then decreased to *** short tons in 2018. CR/PR at Table III-4.

domestic industry increased its U.S. shipments by only *** percent as apparent U.S. consumption rose by 12.7 percent.[198] The industry's inventories grew absolutely and relative to production and shipments reflecting an inability to take advantage of the growing demand during the POI.[199]

As described above, the domestic industry also lost market share to the increasing volumes of cumulated subject imports that frequently undersold the domestic product. The industry's share of apparent U.S. consumption fell from 90.8 percent in 2016 to 85.8 percent in 2017, and 80.9 percent in 2018.[200]

The domestic industry's employment-related indicia were mixed over the POI. From 2016 to 2018, the domestic industry's number of production related workers ("PRWs")[201] and hours worked declined,[202] but wages paid[203] and hourly wages increased.[204] Worker productivity increased irregularly from 2016 to 2018.[205]

The domestic industry's financial performance deteriorated over the POI. Although the domestic industry's sales revenues increased over the POI,[206] most of the industry's financial indicia declined, including its ***.[207] The industry's operating profits fluctuated but *** percent over the POI.[208] The industry reported a comparable decline in net income.[209] Likewise, the domestic industry's operating and net income margins decreased from 2016 to 2018.[210]

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[198] CR/PR at Table C-1. The domestic industry's U.S. shipments were *** short tons in 2016, *** short tons in 2017, and *** short tons in 2018. CR/PR at Table III-6. The domestic industry's net sales (by quantity) declined from *** short tons in 2016 to *** short tons in 2017 and to *** short tons in 2018. CR/PR at Table VI-1.

[199] U.S. producer's end-of-year inventories were *** short tons in 2016, *** short tons in 2017, and *** short tons in 2018, and grew as a share of total shipments from *** percent in 2016 to *** percent in 2018. CR/PR at Table III-7. Poor market conditions in 2018 reportedly forced ***. *** Producer Questionnaire at II-2.

[200] CR/PR at Table C-1.

[201] The number of PRWs fell from 575 in 2016 to 556 in 2017 and then increased to 560 in 2018. CR/PR at Table III-10.

[202] Total hours worked declined from 1,357 hours in 2016 to 1,291 hours in 2017 and continue to decline to 1,289 in 2018. CR/PR at Table III-10.

[203] Wages paid decreased from $58,588 in 2016 to $56,871 in 2017 and then increased to $60,147 in 2018. CR/PR at Table III-10.

[204] Hourly wages increased from $43.17 in 2016 to $44.05 in 2017 and $46.66 in 2018. CR/PR at Table III-10.

[205] Productivity was 860.9 short tons per 1,000 hours in 2016, 926.1 short tons per 1,000 hours in 2017, and 896.0 short tons per 1,000 hours in 2018. CR/PR at Table III-10.

[206] The domestic industry's net sales revenues were $658.6 million in 2016, $913.2 million in 2017, and $912.5 million in 2018. CR/PR at Tables VI-1.

[207] The domestic industry's gross profits were $67.4 million in 2016, $127.5 million in 2017, and $49.4 million in 2018. CR/PR at Tables VI-1.

[208] CR/PR at Table C-1. The domestic industry's operating income was $43.8 million in 2016, $92.1 million in 2017, and $13.0 million in 2018. CR/PR at Tables VI-1, C-1.

[209] The domestic industry's net income was $43.3 million in 2016, $90.9 million in 2017, and $12.5 million in 2018. CR/PR at Table VI-1.

The domestic industry's capital expenditures declined during the three years of the POI, but its R&D expenditures increased.[211] The domestic industry's assets increased but its return on assets declined from 2016 to 2018.[212] Finally, the domestic industry reported a large number of negative effects on investment and on growth and development due to subject imports during the POI, including ***.[213]

Thus, as apparent U.S. consumption rose substantially, the domestic industry faced increasing volumes of cumulated subject imports that frequently undersold the domestic product and captured market share from the domestic industry, reduced the industry's production, shipments, and sales, and led to increasing inventories. Further, the increasing volume of subject imports suppressed the industry's prices resulting in a cost-price squeeze and declining financial performance.

In sum, the domestic industry's trade data, prices, revenues, and finances were worse than they would have been otherwise because of the subject imports. We therefore find that cumulated subject imports had a significant adverse impact on the domestic industry.

Joint Respondents argue that subject imports were drawn into the U.S. market due to a series of supply shocks described above. However, the series of events Joint Respondents emphasize does not explain fully the increase in subject import volume throughout the POI.[214] We plan to examine more closely issues with domestic acetone supply in any final phase investigations.

Joint Respondents further contend that production decisions, such as that by Shell to shut down production in Deer Park, Texas are driven entirely by conditions in the phenol

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(…Continued)

[210] The domestic industry's operating income as a share of net sales was 6.6 percent in 2016, 10.1 percent in 2017, and 1.4 percent in 2018. CR/PR at Tables VI-1, C-1. The domestic industry's net income as a share of net sales was 6.6 percent in 2016, 9.9 percent in 2017, and 1.4 percent in 2018. *Id*.

[211] CR/PR at Tables VI-5. The domestic industry's capital expenditures were $26.5 million in 2016, $21.0 million in 2017, and $19.9 million in 2018. CR/PR at Table VI-5. The domestic industry's R&D expenses increased during the POI, from $*** in 2016 to $*** in 2017 and $*** in 2018. *Id*.

[212] Total net assets were $128.5 million in 2016, $141.7 million in 2017, and $145.1 million in 2018. CR/PR at Table VI-6. The industry's operating return on assets was 34.1 percent in 2016, 65.0 percent in 2017, and 8.9 percent in 2018. *Id.*

[213] CR/PR at Tables VI-8.

[214] We note that, while responses to Hurricane Harvey in 2017 and Shell's shutdown in February 2018 may have resulted in supply shortfalls at that time, U.S. production was higher during 2017 than either during 2016 or 2018. CR/PR at Table III-4. Moreover, these events do not explain the large volumes of subject imports that continued to enter in the second half of 2018. *See* CR/PR at Fig. IV-6. Joint Respondents further contend that subject imports simply filled the gap created by a 10 percent reduction in U.S. production in 2018 due to Shell's shutdown. Joint Respondents' Brief at 12-13. The evidence does not indicate that there was a shortfall. The industry's production declined by only 1.1 percent and inventories increased 28.4 percent over the POI while apparent U.S. consumption rose and the industry continued to have excess capacity. *See* CR/PR at Table C-1. Moreover, while Shell reduced its capacity from *** short tons in 2017 to *** short tons in 2018, its production fell by only about *** short tons, from *** short tons in 2017 to *** short tons in 2018. CR/PR at Table III-4.

market.[215] In any final phase of these investigations, we intend to further examine the effects of the phenol market on production of acetone.

We have also considered whether there are other factors that may have had an impact on the domestic industry during the POI to ensure that we are not attributing injury from such other factors to subject merchandise. We have considered the role of nonsubject imports and demand in the U.S. market. Nonsubject imports had a minimal presence in the U.S. market during the POI.[216] As described above, demand increased from 2016 to 2018.[217] Accordingly, neither nonsubject imports nor trends in demand can explain the domestic industry's declining performance during the POI.

VIII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of acetone from Belgium, Korea, Singapore, South Africa, and Spain that are allegedly sold in the United States at less than fair value. We also determine that imports of acetone from Saudi Arabia that are allegedly sold in the United States at LTFV are negligible and terminate the investigation with respect to Saudi Arabia.

[215] Joint Respondents' Brief at 8-9, 11, 40.

[216] *See* CR/PR at Table IV-11. Nonsubject imports accounted for 1.0 percent of apparent U.S. consumption in 2016, 2.3 percent in 2017 and 1.1 percent in 2018. CR/PR at Table IV-11 (including imports from Saudi Arabia).

[217] *See* CR/PR at Table C-1.

PART I: INTRODUCTION

BACKGROUND

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by AdvanSix Inc., Parsippany, New Jersey, Altivia Petrochemicals, LLC, Haverhill, Ohio, and Olin Corporation, Clayton, Missouri, on February 19, 2018, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of acetone ("acetone")[1] from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
February 19, 2019	Petition filed with Commerce and the Commission; institution of Commission investigations (84 FR 6819, February 28, 2019)
March 12, 2019	Commission's conference
March 18, 2019	Commerce's notice of initiation (84 FR 9755, March 18, 2019)
April 4, 2019	Commission's vote
April 5, 2019	Commission's determination
April 12, 2019	Commission's views

[1] See the section entitled "The Subject Merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[2] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] A list of witnesses appearing at the conference is presented in appendix B of this report.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the*

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, alleged dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

MARKET SUMMARY

Acetone is used both as a chemical intermediate in the production of other chemicals (e.g., plastics and pharmaceuticals) and as a solvent. The leading U.S. producers of acetone are *** and ***, while leading producers of acetone outside the United States include *** of Belgium, *** of Korea, *** of Saudi Arabia, *** of Singapore, *** of South Africa and *** of Spain. The leading U.S. importers of acetone from Belgium is ***, *** from Korea, *** from Saudi Arabia, *** from Singapore, *** from South Africa, and *** from Spain. The leading importer of product from nonsubject countries is ***. U.S. purchasers of acetone are firms that produce methyl methacrylate ("MMA"), bisphenol A ("BPA"), and other downstream chemical products, and chemical distributors; leading purchasers include MMA producers ***.

Apparent U.S. consumption of acetone totaled approximately 1.3 million short tons ($1.0 billion) in 2018. Currently, seven firms are known to produce acetone in the United States. U.S. producers' U.S. shipments of acetone totaled 1.0 million short tons ($871 million) in 2018, and accounted for 80.9 percent of apparent U.S. consumption by quantity and 82.0 percent by value. U.S. imports from subject sources totaled 247 million short tons ($182 million) in 2018 and accounted for 18.5 percent of apparent U.S. consumption by quantity and 17.4 percent by

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

value. U.S. imports from nonsubject sources totaled 8.1 million short tons ($6 million) in 2018 and accounted for 0.6 percent of apparent U.S. consumption by quantity and 0.6 percent by value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of six firms that accounted for the vast majority of U.S. production of acetone. U.S. imports are based on data from eleven U.S. importers that submitted that questionnaires. Among subject sources, these data represent *** percent and all import sources represent *** percent of imported accetone. In light of this coverage, U.S. imports are based on official import statistics. In particular, questionnaire data represent *** percent of imports from Belgium; *** percent of imports from Korea; *** percent of imports from Saudi Arabia; *** percent of imports from Singapore; *** percent of imports from South Africa; and *** percent of imports from Spain in 2018.

PREVIOUS AND RELATED INVESTIGATIONS

Acetone has not been the subject of any prior countervailing or antidumping duty investigations in the United States.

NATURE AND EXTENT OF ALLEGED SUBSIDIES AND SALES AT LTFV

Alleged sales at LTFV

On March 18, 2019, Commerce published a notice in the *Federal Register* of the initiation of its antidumping duty investigations on product from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain.[6] Commerce has initiated antidumping duty investigations based on estimated dumping margins ranging from 43.41 percent to 73.69 percent for acetone from Belgium;[7] ranging from 112.72 to 174.66 percent for Korea;[8] 36.88 percent for Saudi

[6] *Full Title of Notice of Initiation*, 84 FR 9755, March 18, 2019.

[7] *Acetone from Belgium*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March 11, 2019.

[8] *Acetone from Korea*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March 11, 2019.

Arabia;[9] ranging from 14.52 to 131.75 percent for Singapore;[10] ranging from 214.09 to 414.92 percent for South Africa;[11] and 102.97 and 171.81 percent for Spain.[12]

THE SUBJECT MERCHANDISE

Commerce's scope

In the current proceeding, the scope published by the Department of Commerce is as follows:[13]

> The merchandise covered by these investigations is all grades of liquid or aqueous acetone. Acetone is also known under the International Union of Pure and Applied Chemistry (IUPAC) name propan-2-one. In addition to the IUPAC name, acetone is also referred to as +-ketopropane (or betaketopropane), ketone propane, methyl ketone, dimethyl ketone, DMK, dimethyl carbonyl, propanone, 2-propanone, dimethyl formaldehyde, pyroacetic acid, pyroacetic ether, and pyroacetic spirit. Acetone is an isomer of the chemical formula C3H6O, with a specific molecular formula of CH3COCH3 or (CH3)2CO.
>
> The scope includes acetone that is combined or mixed with other products, including, but not limited to, isopropyl alcohol, benzene, diethyl ether, methanol, chloroform, and ethanol, regardless of the quantity or value of the acetone component. For such combined products, only the acetone component is covered by the scope of these investigations. Acetone that has been combined with other products is included within the scope, regardless of whether the combining occurs in third countries. Notwithstanding the foregoing language, an acetone combination or mixture that is transformed through a chemical reaction into

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[9] *Acetone from Saudi Arabia*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March 11, 2019.

[10] *Acetone from Singapore*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March 11, 2019.

[11] *Acetone from South Africa*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March11, 2019.

[12] *Acetone from Spain*, Enforcement and Compliance Office of AD/CVD Operations Antidumping Duty Investigation Initiation Checklist, March 11, 2019.

[13] U.S. Department of Commerce, "Acetone From Belgium, the Republic of Korea, the Kingdom of Saudi Arabia, Singapore, the Republic of South Africa, and Spain: Initiation of Less-Than-Fair-Value Investigations," *Federal Register* notice, March 18, 2019, 9755-9761 https://www.govinfo.gov/content/pkg/FR-2019-03-18/pdf/2019-05004.pdf.

another product, such that, for example, the acetone can no longer be separated from the other products through a distillation process (*e.g.,* methyl methacrylate (MMA) or Bisphenol A (BPA)) is excluded from these investigations.

The scope also includes acetone that is commingled with acetone from sources not subject to these investigations, regardless of the quantity or value of the subject acetone component. Only the subject merchandise component of such commingled products is covered by the scope of these investigations. Acetone that has been commingled with acetone from sources not subject to these investigations is included within the scope, regardless of whether the combining occurs in third countries. The acetone component from sources not subject to these investigations may still be subject to other acetone investigations.

The Chemical Abstracts Service (CAS) registry number for acetone is 67–64–1.

The merchandise covered by these investigations is currently classifiable under Harmonized Tariff Schedule of the United States (HTSUS) subheadings 2914.11.1000 and 2914.11.5000. Acetone and acetone combinations and mixtures covered by these investigations may also enter under different HTSUS subheadings, such as 2902.20.0000, 2902.70.0000, 2905.12.0050, or 2914.12.0000, however, this list of HTSUS subheadings is non-exhaustive. Although these HTSUS subheadings and CAS registry number are provided for convenience and customs purposes, the written description of the scope of these investigations is dispositive.

Tariff treatment

Based upon the proposed scope, information available to the Commission indicates that the merchandise subject to these investigations—all grades of liquid or aqueous acetone—is provided for in subheadings 2914.11.1000 ("Derived in whole or in part from cumene") and 2914.11.5000 ("Other") of the Harmonized Tariff Schedule of the United States ("HTS").[14] The 2019 general rates of duty are 5.5 percent ad valorem and free, respectively. U.S. imports of

[14] The acetone combinations or blends that fall under HTS codes 2902.20.0000, 2902.70.0000, 2905.12.0050, or 2914.12.0000 are overly broad and non-specific for purposes of this report. Subsequently, this report does not that contain data for, or information pertaining to, acetone blends in these HTS codes.

acetone from China are also subject to an additional 10 percent rate of duty.[15] Acetone has the Chemical Abstracts Service (CAS) registry number of 67-64-1. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Subject merchandise also includes acetone that is combined or mixed with other products, including, but not limited to, benzene, diethyl ether, methanol, chloroform, and ethanol, whether or not processed in a third country. These products are provided for in various HTS subheadings, depending on their chemical structure and essential character. While the HTSUS subheadings and CAS registry number are provided for convenience and customs purposes, the written description of the scope of these investigations is dispositive.

THE PRODUCT

Description and applications[16]

Acetone, also known as dimethyl ketone, propan-2-one, or 2-propanone, among other names, is an organic chemical with the formula $(CH_3)_2CO$. Acetone is used both as a chemical intermediate in the production of other chemicals (e.g., plastics and pharmaceuticals) and as a solvent. Acetone is available as a clear colorless liquid with a sweet odor.

Acetone is typically sold as technical grade product (reportedly about 98 percent of the market) but some specialty products of higher purity and/or containing no benzene are also

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[15] As noted in Chapter 99 of the 2019 Basic Edition of the HTS, "For the purposes of heading 9903.88.03, products of China, as provided for in this note, shall be subject to an additional 10 percent ad valorem rate of duty. The products of China that are subject to an additional 10 percent ad valorem rate of duty under heading 9903.88.03 are products of China that are classified in the subheadings enumerated in U.S. note 20(f) to subchapter III. All products of China that are classified in the subheadings enumerated in U.S. note 20(f) to subchapter III are subject to the additional 10 percent ad valorem rate of duty imposed by heading 9903.88.03.

Notwithstanding U.S. note 1 to this subchapter, all products of China that are subject to the additional 10 percent ad valorem rate of duty imposed by heading 9903.88.03 shall also be subject to the general rates of duty imposed on products of China classified in the subheadings enumerated in U.S. note 20(f) to subchapter III."

[16] Unless otherwise noted, this information is based on a variety of sources, including the petition; *Hawley's Condensed Chemical Dictionary*, 11th edition; "Chemical Intermediates: Acetone," AdvanSix Product Safety Summary, May 2018 (https://www.advansix.com/assets/uploads/2018/06/Acetone_CAS-67-64-1-PRS_v2DIGITAL.pdf); "Acetone: Technical Data Sheet," Shell Chemicals, https://www.shell.com/business-customers/chemicals/our-products/acetone/_jcr_content/par/textimage.stream/1516690469896/cc2d0fa6d571143b0ebf06521324ccee43bfd729a3f13c5dfd636a0eb6c63049/acetone-u8903-dec-2017.pdf; IHS, "Acetone," a summary of the full report, dated August 2018, https://ihsmarkit.com/products/acetone-chemical-economics-handbook.html.

available.[17] The grades generally differ by the kind and amounts of impurities in the product. Some customers' requirements for acetone purity exceed those of the technical grade. These higher purity products are often referred to as "pharmaceutical grade" acetone or acetone with no benzene, but the purity standards for these products are set by individual customers, not by government or industry organizations.

Acetone is used as a solvent in many products, including gums, resins, fats, greases, paints, oils, coatings, waxes, plastics, dyestuffs, cellulosics, and rubber cements.[18] Use as a solvent represents about 34 percent of global consumption of the product.[19] Acetone is also used as an input for production of methyl methacrylate (25 percent of global consumption) and bisphenol A (the HIS summary notes that use for bisphenol A is expected to reach or exceed MMA consumption levels by 2022);[20] other solvents; and a wide variety of coatings and plastics.[21]

Manufacturing processes

The three main synthetic chemical processes for the commercial production of acetone are the cumene peroxidation process; the catalytic dehydrogenation of isopropyl alcohol; and the conversion of coal through the Fischer-Tropsch process.[22] The cumene process is used to produce almost all acetone manufactured globally. The remainder (reportedly less than 10 percent) of global production is mainly produced in South Africa through the coal conversion process. The acetone produced by Dow and Sasol is benzene-free and able to be used in select applications requiring higher-purity product.

In the cumene peroxidation process, cumene is oxidized in air to produce cumene hydroperoxide. The cumene hydroperoxide is then cleaved with sulfuric acid to form phenol

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[17] Petition, p. 5.

[18] Petition, 5; IHS, "Acetone," a summary of the full report, dated August 2018, https://ihsmarkit.com/products/acetone-chemical-economics-handbook.html; retrieved March 9, 2019, AdvanSix, "Acetone: Technical Datasheet," May 2018-3, https://www.advansix.com/chemicalintermediates/?document=acetone&download=1 .

[19] Global consumption estimates from IHS, "Acetone," a summary of the full report, dated August 2018, https://ihsmarkit.com/products/acetone-chemical-economics-handbook.html; retrieved March 9, 2019.

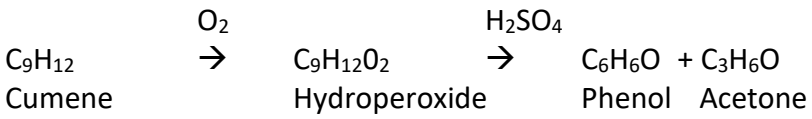
[20] Global consumption estimates from IHS, "Acetone," a summary of the full report, dated August 2018, https://ihsmarkit.com/products/acetone-chemical-economics-handbook.html, retrieved March 9, 2019.

[21] AdvanSix, "Acetone: Technical Datasheet," May 2018-3, https://www.advansix.com/chemicalintermediates/?document=acetone&download=1; IHS, "Acetone," a summary of the full report, dated August 2018, https://ihsmarkit.com/products/acetone-chemical-economics-handbook.html; retrieved March 9, 2019.

[22] Green Biologics produces benzene-free renewable acetone using microbial biocatalytic fermentation of certain sugars; chemically, it is the same as the subject product. https://greenbiologics.com/what-we-do/acetone/; retrieved March 9, 2019.

and acetone. The acetone is then separated from the mixture using distillation.[23] A chemical schematic of the process is shown in figure 1:

Figure 1. A chemical schematic of the cumene peroxidation process



Source: Commission staff based on numerous sources.

Another process that yields acetone is the catalytic dehydrogenation of isopropyl alcohol. In this process, a catalyst such as brass or copper is used to convert isopropyl alcohol into acetone.[24] Use of isopropyl alcohol as an input results in production of benzene-free acetone.[25] Dow has traditionally been the sole U.S. company using this process.

A third process that yields acetone is the conversion of coal through the Fischer-Tropsch process, wherein coal is gasified to form syngas. The syngas is then converted to numerous downstream chemicals, including acetone, through the Fischer-Tropsch synthesis; two chemical reactions—hydrogenation and polymerization--occur during the syngas conversion. The acetone is then separated from the resulting process stream.[26]

DOMESTIC LIKE PRODUCT ISSUES

Petitioners contend that the Commission should find a single domestic like product, coextensive with Commerce's scope, as the Commission has in its prior investigations involving chemicals.[27] Also, the petitioners urge the Commission to follow its past practices wherein it does not normally find separate like products based on different grades of chemicals or mineral products.[28] Furthermore, petitioners assert that a single domestic like product finding is warranted as there is no clear dividing lines between the different grades of acetone. They further contend that acetone produced by *** and *** are sold as standard grade through the same channels of distribution similar to other imports and domestic produced acetone.[29]

In contrast, Sasol advances the argument that the Commission should find two separate like products because there is a clear dividing line between benzene-free acetone and cumene-based acetone.[30] Unlike other U.S. producers, except ***, Sasol assert that they produce

[23] Petition, p. 8.
[24] Petition, p. 8.
[25] Conference transcript, p. 162 (Grimson).
[26] Petition, p. 9.
[27] Petitioners' postconference brief, p. 12.
[28] Ibid.
[29] Ibid.
[30] SASOL's postconference brief, p. 10.

acetone differently via the Fischer-Tropsch synthesis method, which starts with coal as the raw material instead of cumene.[31] Subsequently, Sasol contends that there production process leads to a benzene-free acetone that has a low alcohol content, which makes it a separate and distinct product.[32] Sasol argues that its acetone cannot be substituted for standard grade acetone, and that customers perceive product as different because it is benzene-free.[33] Furthermore, Sasol contends that the difference between their acetone and standard grade acetone is reflected in the price of the two products, as benzene-free acetone price is higher than that of standard grade acetone.

[31] Ibid., p. 13.
[32] Ibid.
[33] Ibid., p. 16.

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PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

Acetone is most frequently produced using the cumene peroxidation method which jointly produces both phenol and acetone, as discussed in Part I.[1] Acetone is used in a variety of applications. Methyl methacrylate ("MMA") is the largest end use of acetone in the United States, accounting for *** percent of 2017 U.S. consumption of acetone, followed by solvents (*** percent), and bisphenol A ("BPA") (*** percent).[2] MMA is typically used to produce acrylic sheet and molding, which is used in construction, transportation, and medical devices. Solvents are used in nail polish removers, cement, lacquer and finishers, cleaners, paint, coatings, films and adhesives, pharmaceuticals, and household and personal care products. BPA is used to produce polycarbonate resins used in optical media, electrical and electronic uses, and the automotive sector.[3]

The major U.S. MMA producers are Dow, Evonik, and Lucite.[4] The largest U.S. acetone purchasers in 2018, based on responses to the lost sale lost revenue survey, were ***.

The vast majority of acetone sold in the U.S. market is produced and marketed as a standard or technical grade product. Standard grade acetone may undergo further testing and certification, either at the production facility or at the customer's facility, to meet specialty grade requirements.[5]

One U.S. producer and six importers reported significant changes in the product mix or marketing for acetone since January 1, 2016. Four of these firms, including U.S. producer *** and importers ***, cited Shell's shutdown of one of its acetone/phenol lines in Deer Park, Texas in 2018. Importer *** stated that purchasers increased imports in anticipation of Shell's shutdown that was planned for January 2018, but then delayed, which resulted in oversupply of acetone in the Gulf region. It added that three other U.S. producers shut down production during 2014 through 2016 because of declining demand for phenol, but that as phenol prices increased, U.S. producers increased their production of phenol and acetone. Importer *** stated that the Shell shutdown was driven by a desire to balance the phenol market and resulted in reduced acetone supply by 147,700 short tons annually. In addition, *** stated that

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[1] The South African producer Sasol uses a different production method, and U.S. producer Dow uses a third method.

[2] *Chemical Economics Handbook: Acetone, IHS*, August 15, 2018, p. 32.

[3] *Chemical Economics Handbook: Acetone, IHS*, August 15, 2018, p. 11 and 20.

[4] Conference transcript, p. 33 (Duhe).

[5] U.S. producer AdvanSix sells a National Formulary ("NF") grade and a low-water grade for pharmaceutical applications, ***. Petition, pp. 5-6. U.S. producers Olin and Altivia do not produce specialty grade acetone. Conference transcript, p. 65 (Duhe and Safar). ***.

Among importers, specialty grade shipments were reported only for imports from Korea. The South African producer Sasol stated that its benzene-free acetone is not a specialty grade but rather is a distinct product from acetone that is produced using cumene. Respondent Sasol's postconference brief, exh. 1, p. 2.

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Altivia acquired the idled phenol/acetone facilities of Haverhill Chemicals in late 2015, and restarted only one of the two phenol/acetone units in 2015. Importer *** stated that although acetone was expected to be in short supply in 2016 and 2017 because of reduced global phenol production, global phenol demand increased in 2018, resulting in increased global supply of acetone. Importer *** stated that increased awareness of the negative health effects of benzene strengthened the market for benzene-free acetone.

Apparent U.S. consumption of acetone increased during 2016-18. Overall, apparent U.S. consumption in 2018 was 12.7 percent higher than in 2016.

CHANNELS OF DISTRIBUTION

U.S. producers of acetone sold mainly to end users, with nearly 80 percent of their U.S. commercial shipments going to this channel in 2018 (table II-1). The majority of subject import shipments were also made to end users, although the shares varied by country. More than *** percent of import shipments from Belgium went to end users. *** import shipments from South Africa were made to end users. *** import shipments from Saudi Arabia were made to end users in 2018. *** import shipments from Singapore went to end users in 2017 and 2018 ***. *** shipments of imports from Korea and Spain went to distributors in 2018, ***.

GEOGRAPHIC DISTRIBUTION

U.S. producers reported selling acetone to all U.S. regions, with at least four of the six responding U.S. producers reporting sales to the Midwest, Southeast, Central Southwest, and Pacific Coast (table II-2). Subject imports were also reportedly sold to all regions, but no individual subject country except *** was reported to serve all U.S. regions. Imports from all subject countries except *** were sold to the Central Southwest region. Only one importer (of acetone from ***) reported selling to the Mountains, Pacific Coast, and Other regions. Subject imports from *** were sold only to one region, the Central Southwest, and imports from ***.

For U.S. producers, 39.5 percent of sales were within 100 miles of their production facility, 41.5 percent were between 101 and 1,000 miles, and 19.0 percent were over 1,000 miles. Importers sold 40.6 percent within 100 miles of their U.S. point of shipment, 53.0 percent between 101 and 1,000 miles, and 6.3 percent over 1,000 miles.

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Table II-1
Acetone: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2016-18

Item	Calendar year		
	2016	2017	2018
	Share of U.S. shipments (percent)		
U.S. producers: to Distributors	25.1	19.3	20.1
to End users	74.9	80.7	79.9
U.S. importers: Belgium to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Korea to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Saudi Arabia to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Singapore to Distributors	***	***	***
to End users	***	***	***
U.S. importers: South Africa to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Spain to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Subject sources to Distributors	***	***	***
to End users	***	***	***
U.S. importers: Nonsubject sources to Distributors	***	***	***
to End users	***	***	***
U.S. importers: All sources to Distributors	***	***	***
to End users	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

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Table II-2
Acetone: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Belgium	Korea	Saudi Arabia	Singapore	South Africa	Spain	Subject
Northeast	3	***	***	***	***	***	***	2
Midwest	6	***	***	***	***	***	***	4
Southeast	5	***	***	***	***	***	***	5
Central Southwest	6	***	***	***	***	***	***	7
Mountains	2	***	***	***	***	***	***	1
Pacific Coast	4	***	***	***	***	***	***	1
Other[1]	1	***	***	***	***	***	***	1
All regions (except Other)	2	***	***	***	***	***	***	1
Reporting firms	6	2	4	1	2	1	2	9

[1] All other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Because the vast majority of acetone produced worldwide also yields phenol, production decisions involve supply and demand considerations for both phenol and acetone since producers need to be able sell both products.[6] [7] The production process for acetone and phenol is capital intensive, with high fixed costs, and is most efficient to operate continuously.[8]

Table II-3 provides a summary of the supply factors regarding acetone from U.S. producers and from subject countries.

[6] INEOS stated that producers typically set their production levels to meet the contractual demand for phenol. Conference transcript, p. 133 (Foster). ***.

[7] *** stated "***."

Since 2017, U.S. demand for phenol has grown at 2.5-3.5 percent per year compared to 2 percent per year for acetone. Phenol and acetone generally have different uses, with the exception of BPA. BPA manufacturers use 0.3 pounds of acetone per one pound of phenol. Respondents' postconference brief on Common Issues, p. 8, and exh. 1, p. 4.

[8] The equipment is designed to run 24 hours a day, 7 days a week. Conference transcript, p. 24 (Sanders).

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Table II-3
Acetone: Supply factors that affect the ability to increase shipments to the U.S. market

Item	2016	2018	2016	2018	2016	2018	Shipments by market in 2018 (percent)		Able to shift to alternate products
	Capacity (1,000 short tons)		Capacity utilization (percent)		Inventories as a ratio to total shipments (percent)		Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	1,384	1,310	84.4	88.1	4.5	5.9	94.0	6.0	0 of 6
Belgium	***	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***	***
Saudi Arabia	***	***	***	***	***	***	***	***	***
Singapore	***	***	***	***	***	***	***	***	***
South Africa	***	***	***	***	***	***	***	***	***
Spain	***	***	***	***	***	***	***	***	***
Subject	***	***	***	***	***	***	***	***	0 of 8
Subject less Saudi Arabia	***	***	***	***	***	***	***	***	0 of 6

Note.--Responding U.S. producers accounted for the vast majority of U.S. production of acetone in 2018. Responding foreign producer/exporter firms accounted for nearly all of U.S. imports of acetone from subject countries during 2018. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Source: Compiled from data submitted in response to Commission questionnaires.

Domestic production

Based on available information, U.S. producers of acetone have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced acetone to the U.S. market. The main contributing factors to this degree of responsiveness of supply is the availability of unused capacity. Factors mitigating responsiveness of supply include a limited ability to shift shipments from alternate markets, limited inventories, a lack of ability to shift production to or from alternate products, and the need to balance phenol production.

U.S. production was relatively stable from 2016 to 2018, declining by 1.1 percent. U.S. producers' capacity increased from 2016 to 2017, by 7.9 percent, and then decreased from 2017 to 2018, by 12.2 percent. The capacity increase in 2017 was driven mainly ***. The capacity decrease in 2018 was driven by ***. U.S. producers' major export markets are Canada and Latin America (including Mexico, Argentina, and Brazil). U.S. producers reported that they do not produce other products on the same equipment used to produce acetone and phenol.

Subject imports

Based on available information, producers of acetone from subject countries have the ability to respond to changes in demand with moderate changes in the quantity of shipments of acetone to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of some unused capacity and the ability to shift shipments from alternate markets. Factors mitigating responsiveness of supply include limited availability of inventories and lack of ability to shift production to or from alternate products.

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From 2016 to 2018, foreign producers reported that capacity declined in South Africa, did not change in Singapore and Spain, increased in Korea and Belgium (by *** percent and *** percent, respectively), and *** in Saudi Arabia. Reported capacity utilization in subject countries in 2018 ranged from ***.

A majority of acetone production in Korea and South Africa was shipped to their home markets in 2018, whereas the majority of acetone production in Belgium, Saudi Arabia, Singapore, and Spain went to third-country export markets. No foreign producer reported production of other products using the same equipment as acetone.

Imports from nonsubject sources

Nonsubject imports accounted for 3 percent of total U.S. imports in 2018. The largest source of nonsubject imports during 2016-18 was Taiwan, which accounted for most of nonsubject imports in 2016 and 2017, but a small share in 2018. Finland and Italy were the largest sources of nonsubject imports in 2018.

Supply constraints

The supply of acetone has been affected by several events since January 2016. In August 2017, Hurricane Harvey impacted acetone producers located on the Gulf Coast. This affected not only acetone production, but also the production of downstream products.[9] In October 2017, Shell issued a notice that it would idle one of its two acetone/phenol production lines at its Deer Park, Texas facility in January 2018, and the line has been idled since the end of February 2018.[10]

Four of six responding U.S. producers and one of 10 importers reported that they had experienced supply constraints since January 1, 2016. Three U.S. producers (***), accounting for *** of reported production in 2017, reported declaring a force majeure as a result of Hurricane Harvey in 2017. ***. INEOS reported that its Mobile, Alabama facility declared a force majeure on *** because a 2- to 3-week closure of the Houston Ship Channel prevented it from obtaining cumene from its facility in Texas.[11] ***. *** during and shortly after Hurricane Harvey. ***. *** reported that it may restrict customers ***.

Importer *** reported supply constraints for U.S.-produced acetone including (1) In early 2018, Altivia was running only one of its two phenol/acetone units in Haverhill, Ohio, and the second unit started up later in 2018, (2) Shell shutdown in February 2018 which *** stated was driven by a desire to balance the oversupplied phenol market and reduced the U.S.-

[9] Lucite shut down one of its two MMA plants for three and a half weeks because of flooding. Conference transcript, p. 175 (Connolly).

[10] Conference transcript, p. 37, 85, and 93 (Safar, Duhe, and Sanders).

[11] Respondent INEOS's postconference brief, exh. 1, p. 5.

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produced acetone supply by 147,700 short tons, and (3) in February 2019, both Shell and Altivia declared force majeure on phenol and acetone supply.[12]

Chemical manufacturer Monument stated that, in 2017, it was informed by its U.S. suppliers, including the three petitioners, that they would be restricting the supply of acetone to Monument in 2018, leaving a shortfall of 50 million pounds for its 2018 needs.[13] Some purchasers reported supply issues with U.S. producers in their responses to the lost sale lost revenue ("LSLR") survey (see Part V).

U.S. demand

Based on available information, the overall demand for acetone is likely to experience small changes in response to changes in price. The main contributing factors are the limited range of substitute products and the small cost share of acetone in most of its end-use products.

End uses and cost share

U.S. demand for acetone depends on the demand for U.S.-produced downstream products. Uses include MMA, BPA, and solvents, which are in turn used in a wide variety of end-use products. Acetone can account for a moderate-to-large share of the cost of the intermediate chemical products in which it is used, but a small share of end-use products. Reported cost shares for MMA were 50 to 70 percent, for BPA were 15 to 30 percent, and for solvents were 40 to 100 percent. Other cost shares reported included: derivatives (85 percent), isopropanol (95 percent), diacetone alcohol (93 percent), paints (70 percent), MAA (82 percent), and methyl isobutyl ketone (89 percent).

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[12] Press reports indicate that Shell shut down its phenol/acetone unit from January 17, 2019 to February 13, 2019 to repair equipment, and that the force majeure was in place on phenol but not acetone. In February 2019, Altivia's Haverhill, Ohio facility experienced disruptions in receiving raw materials and shipping finished product as a result of high water levels on the Ohio River.

ICIS News, "Plant status: Shell declares force majeure on U.S. phenol from Texas plant – sources," https://www.icis.com/explore/resources/news/2019/01/25/10311381/plant-status-shell-declares-force-majeure-on-us-phenol-from-texas-plant-sources/, January 25, 2019.

ICIS News, "Plant status: Shell restarts US phenol/acetone unit – sources," https://www.icis.com/explore/resources/news/2019/02/22/10323388/plant-status-shell-restarts-us-phenolacetone-unit-sources/, February 22, 2019. Altivia letter to customers, https://greenchemindustries.com/wp-content/uploads/2019/02/ALTIVIA-Petrochemicals-Occurrence-of-Force-Majeure-Event.pdf, February 22, 2019.

[13] Conference transcript, pp. 115-116.

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Business cycles

Two of five responding U.S. producers and 8 of 12 responding importers indicated that the acetone market was subject to business cycles. Some firms reported seasonality in the U.S. market, with U.S. producers *** reporting higher demand for acetone used in coatings during construction season, and from spring to fall. Importer *** stated that demand for acetone to make MMA is higher in the first and second quarters of the year. Importer *** reported that March/April and October/November are peak demand seasons. Importer *** reported that seasonal demand is related to housing starts and year-end inventory control. Purchasers at the conference stated that demand for acetone used for MMA for coatings is highest in the spring and summer, and that acetone demand tends to be lowest in the fourth quarter of the year.[14] Respondents stated that the acetone industry typically has 5- to 7-year cycles, depending on crude oil prices, propylene demand, phenol supply and demand, and acetone supply and demand.[15]

In addition, importers *** stated that supply and demand for phenol affects the business cycle for acetone. *** stated that producers run their plants based on phenol demand, which has been strong for the last 2 years. *** stated that phenol production has been somewhat cyclical over roughly 5-year periods, and that there are times when phenol demand and production differs from acetone demand. In addition to phenol's effect on the business cycle, importer *** also stated that MMA production drives acetone demand and pricing, and that, in 2018, MMA producers had production turnarounds resulting in less acetone demand.

Three U.S. producers and three importers reported other conditions distinctive to the acetone market. U.S. producers *** reported that acetone production is highly capital-intensive with high fixed costs, requiring producers to operate at high capacity utilization rates to offset the large capital investment and significant ongoing maintenance costs. Importer *** reported the closures of two production sites in the last two years (Axiall (now INEOS) in Plaquemine, Louisiana and Shell at Deer Park, Texas). Importer *** stated that acetone production is driven by demand for phenol. Importer *** stated that regional variations in propylene prices create arbitrage opportunities globally. Importer *** reported that phenol profitability impacts the production and prices of acetone.[16] Sasol stated that it is the only producer of benzene-free acetone in the subject countries, and that only one U.S. producer, Dow, produces benzene-free acetone.[17]

Three U.S. producers and eight importers reported changes to business cycles or conditions of competition since January 1, 2016. U.S. producers *** reported that increased low-priced imports, particularly in 2018, have decreased the demand for domestic acetone and reduced the amount of acetone to which customers are willing to commit in long-term

[14] Conference transcript, p. 165 (Connelly and Haug).

[15] Conference transcript, p. 146 (Duggan).

[16] *** stated "when acetone demand drops at a slower rate than phenol demand, acetone prices will increase. Conversely, when phenol demand growth outstrips acetone demand growth, acetone prices will fall."

[17] Conference transcript, pp. 136-137 (Thornlow).

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contracts. Importers *** stated that stronger than forecasted phenol demand has resulted in too much acetone being produced, which has depressed prices.[18] *** stated that Shell's closure announcement in late 2017 followed by the delay of its closure caused a temporary oversupply of acetone in 2018, which has since been resolved.[19] *** stated that propylene feedstock prices in the United States increased relative to other countries, that U.S. MMA production was low in 2018 due to turnarounds and major mechanical failures, that phenol supply is tight and U.S. manufacturers are increasing operation rates producing more acetone as a byproduct, and that many U.S. acetone plants have shut down operations so imports are needed to meet demand. *** stated that in 2017, acetone demand was strong and phenol demand was slow, resulting in a large drop in phenol prices, but that in 2018 global phenol demand increased more than acetone demand, and phenol prices increased significantly.[20]

Demand trends

Most firms reported an increase in U.S. demand for acetone since January 1, 2016 (table II-4). U.S. producer *** described U.S. demand as relatively flat with MMA growth at -0.6 percent and BPA growth at 0.2 percent, but that global demand growth was 2.6 percent. *** described low growth for acetone used in BPA and solvents. *** stated that growth outside the United States has been driven by growing demand for BPA, and *** also stated that the largest growth in acetone was in Asia, driven by demand for MMA and BPA. *** stated that there was a moderate increase in demand (lower than the rate of GDP growth), driven by continued MMA growth. *** stated that demand fluctuated, based on painting season. Among importers, four firms stated that U.S. demand has generally followed GDP growth. *** stated that U.S. demand for acetone grew by about 7 percent from 2016 to 2018. With respect to global demand, *** cited growth of 2-3 percent per year between 2016 and 2021. Four importers stated that increased BPA production, particularly in Asia, is driving growth in acetone demand outside of the United States, three firms mentioned growth in solvents, and one firm mentioned growth in MMA.

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[18] *** stated that the phenol market was "extremely strong" in 2017 and 2018, with spot prices of phenol selling at a 10-15 cents per pound premium over contract prices. It added that overseas markets renegotiate phenol prices more frequently (monthly in Asia and quarterly in Europe) than does the U.S. market, which generally has multi-year contracts, although INEOS attempted to get the U.S. market to purchase on quarterly price negotiations for 2018. It reported that "many of the U.S. producers who were undercontracted on acetone in 2018 compared to their phenol contracts inflamed their own situation by making more phenol than contracts required in an effort to exploit the high spot market prices whereby making even more acetone."

[19] ***.

[20] Monthly phenol contract prices published by IHS fluctuated upwards during 2016 between *** per pound, and then spiked to *** in February/March 2017. These prices then ranged between *** for most of the rest of 2017, before rising again to *** in December 2017. In 2018, these prices fluctuated between ***, before dropping to *** in December 2018. IHS Markit reported in petitioners' postconference brief, exh. 17.

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Table II-4
Acetone: Firms' responses regarding U.S. demand and demand outside the United States

Item	Number of firms reporting			
	Increase	No change	Decrease	Fluctuate
Demand inside the United States: U.S. producers	2	2	---	1
Importers	10	1	1	---
Demand outside the United States: U.S. producers	4	---	---	---
Importers	9	1	1	1

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products

Substitutes for acetone are limited. Most U.S. producers (4 of 5 responding) and importers (9 of 12 responding) reported that there were no substitutes. One U.S. producer stated that IPA can be produced from propylene instead of acetone. Two importers listed methyl ethyl ketone ("MEK") and ethyl acetate as substitutes for acetone as a solvent in paints and coatings.

***.

MMA can also be produced using production methods that do not use acetone, including ethylene-based production. There is currently no ethylene-based production of MMA in the United States, but there is such production in Asia and the Middle East. ***.[21]

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported acetone depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there is a high degree of substitutability between domestically produced acetone and acetone imported from subject sources.

Lead times

Acetone is primarily sold from inventory. U.S. producers reported that 72 percent of their commercial shipments were from inventories, with lead times averaging 11 days. The remaining 28 percent of their commercial shipments were produced-to-order, with lead times averaging 30 days. Four importers (***) reported selling mainly from U.S. inventories, three (***), reported selling mainly from foreign inventories, and one (***) reported selling mainly

[21] ***.

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produced-to-order acetone. Importers reported lead times of 2 to 30 days from U.S. inventories, 22 to 75 days from foreign inventories, and 30 days for produced-to-order acetone.

Most importers have their own storage tanks dedicated to acetone.[22] These storage tanks are expensive to lease and maintain.[23] Tanks storing acetone are dedicated for this use only; in order to prepare them to store other substances, an extensive cleaning process must be undertaken.[24] Many of the large end users, including MMA producers, also have their own storage tanks for acetone.[25]

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[26] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for acetone. Purchasers most often identified supply (e.g., security of supply and availability) as their top factor in purchase decisions. Price was the second most-often listed factor. Other factors listed were quality, logistics, delivery, and maintaining multiple suppliers.

Comparison of U.S.-produced and imported acetone

In order to determine whether U.S.-produced acetone can generally be used in the same applications as imports from subject and nonsubject sources, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-5, all responding U.S. producers and importers reported that domestic acetone can always or frequently be used interchangeably with acetone imported from Belgium, Korea, Saudi Arabia, Singapore, and Spain. All responding U.S. producers and a majority of responding importers reported that domestic acetone can always or frequently be used interchangeably with acetone imported from South Africa.

Two firms provided additional comments regarding interchangeability in their questionnaire responses. Importer *** stated that acetone sold in the distribution market and for some MMA production is “a fungible, global, commodity.” Sasol stated that its acetone produced in South Africa is benzene-free and that customers requiring benzene-free acetone cannot substitute “standard” acetone in applications that require benzene-free product.[27]

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[22] Conference transcript, p. 33 (Duhe).

[23] Conference transcript, pp. 75-76 (Anderson).

[24] Conference transcript, p. 178 (Haug).

[25] Conference transcript, p. 80 (Duhe).

[26] This information is compiled from responses by purchasers identified by Petitioners to the lost sales lost revenue allegations. See Part V for additional information.

[27] ***. Respondent Sasol’s postconference brief, p. 10 and exh. 1, pp. 4-5. ***.

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Table II-5
Acetone: Interchangeability between acetone produced in the United States and in other countries, by country pair

Country pair	U.S. producers				U.S. importers			
	A	F	S	N	A	F	S	N
United States vs. Belgium	4	1	---	---	6	1	---	---
United States vs. Korea	4	1	---	---	8	---	---	---
United States vs. Saudi Arabia	4	1	---	---	5	1	---	---
United States vs. Singapore	4	1	---	---	7	---	---	---
United States vs. South Africa	3	1	---	---	3	1	2	---
United States vs. Spain	4	1	---	---	5	1	---	---
Belgium vs. Korea	3	---	---	---	3	2	---	---
Belgium vs. Saudi Arabia	3	---	---	---	3	1	---	---
Belgium vs. Singapore	3	---	---	---	3	1	---	---
Belgium vs. South Africa	3	---	---	---	2	1	2	---
Belgium vs. Spain	3	---	---	---	3	1	---	---
Korea vs. Saudi Arabia	3	---	---	---	3	2	---	---
Korea vs. Singapore	3	---	---	---	4	2	---	---
Korea vs. South Africa	3	---	---	---	2	2	2	---
Korea vs. Spain	3	---	---	---	3	2	---	---
Saudi Arabia vs. Singapore	3	---	---	---	3	1	---	---
Saudi Arabia vs. South Africa	3	---	---	---	2	1	2	---
Saudi Arabia vs. Spain	3	---	---	---	3	1	---	---
Singapore vs. South Africa	3	---	---	---	2	1	2	---
Singapore vs. Spain	3	---	---	---	3	1	---	---
South Africa vs. Spain	3	---	---	---	2	1	1	---
United States vs. Other	3	1	---	---	2	1	---	---
Belgium vs. Other	3	---	---	---	1	1	---	---
Korea vs. Other	3	---	---	---	1	1	---	---
Saudi Arabia vs. Other	3	---	---	---	1	1	---	---
Singapore vs. Other	3	---	---	---	1	1	---	---
South Africa vs. Other	3	---	---	---	1	1	---	---
Spain vs. Other	3	---	---	---	1	1	---	---

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, U.S. producers and importers were asked to assess how often differences other than price were significant in sales of acetone from the United States, subject, or nonsubject countries. As seen in table II-6, all but one responding U.S. producer reported that such differences were never significant in their sales of acetone. In contrast, responding importers reported that such differences were always or frequently significant in all comparisons except United States versus Belgium, for which most importers reported that these differences were never significant in their sales.

Importer *** stated that it procures acetone from multiple regions to assure supply security, that quality and consistent availability are very important, and that other factors include lead times, demurrage risk, and transit time. Importer *** stated that there is not

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sufficient U.S. supply to satisfy domestic demand for acetone. Importer *** stated that it needs to keep inventory in a storage tank *** to compete with the domestic suppliers' transportation network. Importer ***.

Table II-6
Acetone: Significance of differences other than price between acetone produced in the United States and in other countries, by country pair

Country pair	U.S. producers				U.S. importers			
	A	F	S	N	A	F	S	N
United States vs. Belgium	---	---	1	4	1	1	---	3
United States vs. Korea	---	---	1	4	2	2	---	---
United States vs. Saudi Arabia	---	---	1	4	1	1	---	---
United States vs. Singapore	---	---	1	4	2	1	---	---
United States vs. South Africa	---	---	1	3	1	2	---	---
United States vs. Spain	---	---	1	4	1	1	---	---
Belgium vs. Korea	---	---	---	3	---	2	---	---
Belgium vs. Saudi Arabia	---	---	---	3	---	1	---	---
Belgium vs. Singapore	---	---	---	3	---	1	---	---
Belgium vs. South Africa	---	---	---	3	---	2	---	---
Belgium vs. Spain	---	---	---	3	---	1	---	---
Korea vs. Saudi Arabia	---	---	---	3	---	2	---	---
Korea vs. Singapore	---	---	---	3	1	2	---	---
Korea vs. South Africa	---	---	---	3	---	3	---	---
Korea vs. Spain	---	---	---	3	---	2	---	---
Saudi Arabia vs. Singapore	---	---	---	3	---	1	---	---
Saudi Arabia vs. South Africa	---	---	---	3	---	2	---	---
Saudi Arabia vs. Spain	---	---	---	3	---	1	---	---
Singapore vs. South Africa	---	---	---	3	---	2	---	---
Singapore vs. Spain	---	---	---	3	---	1	---	---
South Africa vs. Spain	---	---	---	3	---	1	---	---
United States vs. Other	---	---	1	3	1	1	---	---
Belgium vs. Other	---	---	---	2	---	1	---	---
Korea vs. Other	---	---	---	2	---	1	---	---
Saudi Arabia vs. Other	---	---	---	2	---	1	---	---
Singapore vs. Other	---	---	---	2	---	1	---	---
South Africa vs. Other	---	---	---	2	---	1	---	---
Spain vs. Other	---	---	---	2	---	1	---	---

Note.--A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of five firms that accounted for the vast majority of U.S. production of acetone during 2018.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to eleven firms based on information contained in the petition. Six firms provided usable data on their productive operations.[1] [2] Table III-1 lists U.S. producers of acetone, their production locations, positions on the petition, and shares of total production.

Table III-1
Acetone: U.S. producers of acetone, their positions on the petition, production locations, and shares of reported production, 2018

Firm	Position on petition	Production location(s)	Share of production (percent)
AdvanSix	Petitioner	Parsippany, NJ Philadelphia, PA	***
Altivia	Petitioner	Haverhill, OH	***
Goodyear	***	Pasadena, TX	***
INEOS	***	Theodore, AL	***
Olin	Petitioner	Freeport, Texas	***
Shell	***	Deer Park, TX Theodore, AL	***
Total			***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms of acetone. U.S. producers *** are related to foreign producers of acetone. Also one U.S. producer is related to U.S. importers of the subject merchandise.

[1] In addition, Union Carbide Corporation, a subsidiary of Dow DuPont ("Dow") submitted a questionnaire response after staff's repeated inquiries. The questionnaire was not complete, and was received by staff too late to fully cure the data. ***. Where possible, Dow's data have been presented through this report, though not incorporated into data tabulations.

[2] ***.

Table III-2
Acetone: U.S. producers' ownership, related and/or affiliated firms

* * * * * * *

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2016. In aggregate, the following operational changes were reported by the six responding U.S. producers: one plant closure, one expansion, and five prolonged shutdowns.

Table III-3
Acetone: U.S. producers' reported changes in operations, since January 1, 2016

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. From 2016 to 2018, U.S. producers' total capacity decreased by 5.3 percent. Total U.S. production fluctuated throughout the period of investigation, it increased by 2.3 percent from 2016 to 2017, but declined by 3.4 percent from 2017 to 2018. U.S. producers reported an overall net decline in production but an increase in capacity utilization from 2016 to 2018.

Table III-4
Acetone: U.S. producers' production, capacity, and capacity utilization, 2016-18

Item	Calendar year		
	2016	2017	2018
	Capacity (short tons)		
AdvanSix	***	***	***
Altivia	***	***	***
Goodyear	***	***	***
INEOS	***	***	***
Olin	***	***	***
Shell	***	***	***
Total capacity[1]	1,383,994	1,493,188	1,310,652
	Production (short tons)		
AdvanSix	***	***	***
Altivia	***	***	***
Goodyear	***	***	***
INEOS	***	***	***
Olin	***	***	***
Shell	***	***	***
Total production	1,168,219	1,195,613	1,154,964

Table continued on the next page.

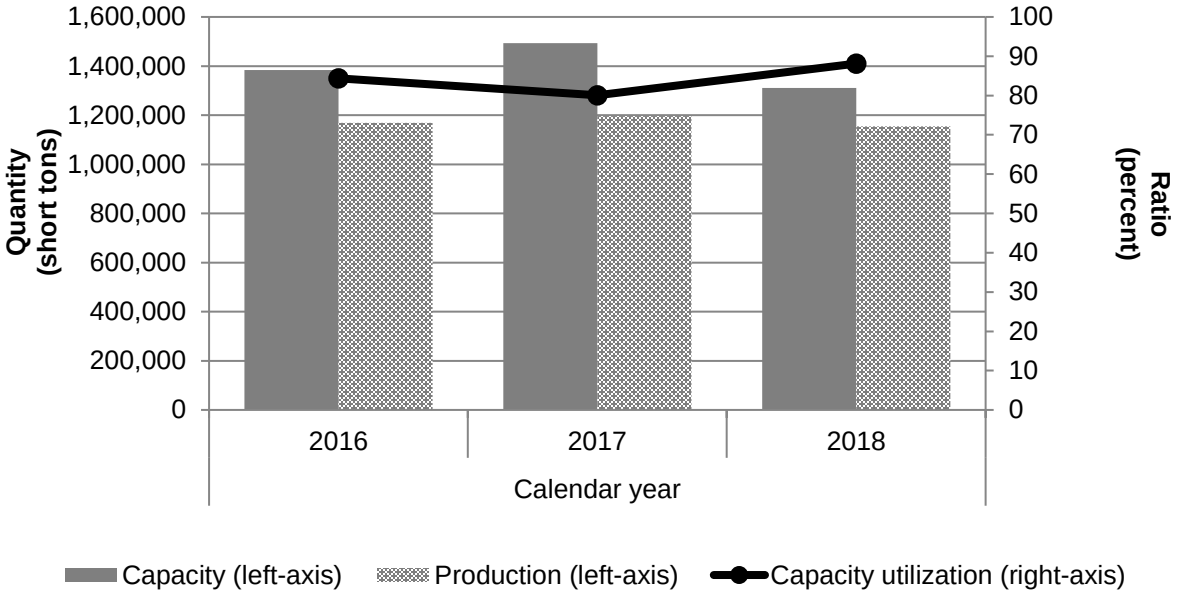
Table III-4--Continued
Acetone: U.S. producers' production, capacity, and capacity utilization, 2016-18

Item	Calendar year		
	2016	2017	2018
	Capacity utilization (percent)		
AdvanSix	***	***	***
Altivia	***	***	***
Goodyear	***	***	***
INEOS	***	***	***
Olin	***	***	***
Shell	***	***	***
Average capacity utilization	84.4	80.1	88.1

[1] ***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.
Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
Acetone: U.S. producers' production, capacity, and capacity utilization, 2016-18



Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

Table III-5 presents data on U.S. producers' capacity and production of alternative products using the same equipment and machinery as acetone. As shown in table III-5, 37.8 percent of the product produced during 2018 by U.S. producers was subject product. This level approximately the percentage of acetone produced equates to using the cumene based process. Acetone is a byproduct of phenol production and the amount of acetone produced is governed by the molecular structure of cumene, which dictates the exact amount of acetone

that will be produced per metric ton of phenol, a ratio of 1 phenol to 0.61 acetone and also global demand for phenol.[3]

Table III-5
Acetone: U.S. producers' overall plant capacity and production on the same equipment as subject product, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Overall capacity	3,705,272	4,030,839	3,485,532
Production:			
Acetone	1,168,219	1,195,613	1,154,964
By-product/co-products	1,951,058	2,039,225	1,903,722
Total production on same machinery	3,119,277	3,234,838	3,058,686
	Ratios and shares (percent)		
Overall capacity utilization	84.2	80.3	87.8
Share of production:			
Acetone	37.5	37.0	37.8
By-product/co-products	62.5	63.0	62.2
Total production on same machinery	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.
Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-6 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. producers' U.S. shipments consistently accounted for the overwhelming majority of all shipments. From 2016 to 2018, the quality of U.S. shipments decreased by 1.7 percent while its value increased by 39.0 percent. The unit value for U.S. producers' U.S. shipments increased by 41.4 percent from 2016 to 2018.

Table III-6
Acetone: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
U.S. shipments	1,080,430	1,061,774	1,085,547
Export shipments	94,584	120,576	69,418
Total shipments	1,175,014	1,182,350	1,154,965
	Value (1,000 dollars)		
U.S. shipments	613,303	841,609	871,113
Export shipments	51,691	85,549	53,352
Total shipments	664,994	927,158	924,465

Table continued on the next page.

[3] Conference transcript, p. 18 (Grimson).

Table III-6—Continued
Acetone: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2016-18

Item	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
U.S. shipments	568	793	802
Export shipments	547	710	769
Total shipments	566	784	800
	Share of quantity (percent)		
U.S. shipments	92.0	89.8	94.0
Export shipments	8.0	10.2	6.0
Total shipments	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments	92.2	90.8	94.2
Export shipments	7.8	9.2	5.8
Total shipments	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.
Note.—***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' INVENTORIES

Table III-7 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments**.** From 2016 to 2018, end-of-period inventories held by U.S. producers increased by *** percent. The ratio of inventories to production, U.S. shipments, and total shipments each increased from 2016 to 2018.

Table III-7
Acetone: U.S. producers' inventories, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
U.S. producers' end-of-period inventories	53,377	63,884	68,544
	Ratio (percent)		
Ratio of inventories to.--			
U.S. production	4.6	5.3	5.9
U.S. shipments	4.9	6.0	6.3
Total shipments	4.5	5.4	5.9

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' imports and purchases of acetone are presented in table III-8. One U.S. producer reported directly importing acetone. *** imported acetone from subject country, ***. Three U.S. producers reported purchasing acetone from other domestic producers or from subject import sources. *** purchased acetone equivalent to more than *** percent of yearly production whereas *** purchased an amount equivalent to less than *** percent of its production (table III-9).

Table III-8
Acetone: U.S. producers' U.S. production, imports and purchases, 2016-18

* * * * * * *

Table III-9
Acetone: U.S. producers' purchases, 2016-18

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-10 shows U.S. producers' employment-related data. From 2016 to 2018, the number of production and related workers ("PRWs") fluctuated slightly. Over the same period, both the total hours worked and hours worked per PRW declined by 5.0 percent and 2.5 percent, respectively. Wages paid increased slightly each year throughout the period as unit labor costs fluctuated due to varying productivity.

Table III-10
Acetone: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2016-18

Item	Calendar year		
	2016	2017	2018
Production and related workers (PRWs) (number)	575	556	560
Total hours worked (1,000 hours)	1,357	1,291	1,289
Hours worked per PRW (hours)	2,360	2,322	2,302
Wages paid (1,000)	58,588	56,871	60,147
Hourly wages (dollars per hour)	$43.17	$44.05	$46.66
Productivity (short tons per 1,000 hours)	860.9	926.1	896.0
Unit labor costs (dollars per short ton)	$50.15	$47.57	$52.08

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission issued importer questionnaires to 21 firms believed to be importers of subject acetone, as well as to all U.S. producers of acetone.[1] Usable questionnaire responses were received from 12 companies, representing 95.5 percent of U.S. imports from Belgium, 84.9 percent of U.S. imports from Korea, 33.0 percent of U.S. imports from Saudi Arabia, 100 percent of U.S. imports from Singapore, 86.1 percent of U.S. imports from South Africa, and 100 percent of U.S. imports from Spain under HTS subheadings 2914.11.10 and 2914.11.50. Table IV-1 lists all responding U.S. importers of acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain, their locations, and their shares of U.S. imports, in 2018.

Table IV-1
Acetone: U.S. importers, their headquarters, and share of total imports by source, 2018

Firm	Headquarters	U.S. imports in 2018			
		Belgium	Korea	Saudi Arabia	Singapore
		Share imported by firm within source (percent)			
INEOS	Theodore, AL	***	***	***	***
Integra	Houston, TX	***	***	***	***
KH Chemicals	Hamilton, NJ	***	***	***	***
LG Chem	Atlanta, GA	***	***	***	***
Lucite	Cordova, TN	***	***	***	***
Mitsui	New York, NY	***	***	***	***
Monument	Houston, TX	***	***	***	***
Oxyde	Houston, TX	***	***	***	***
Plaza	Houston, TX	***	***	***	***
Dow[2]	Deer Park, TX	***	***	***	***
Sasol	Houston, TX	***	***	***	***
Sumitomo	Houston, TX	***	***	***	***
Total		100.0	100.0	100.0	100.0

Table continued on next page.

[1] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS subheading 2914.11.10 and 2914.11.50 in 2018.

[2] ***.

Table IV-1--Continued
Acetone: U.S. importers, their headquarters, and share of total imports by source, 2018

Firm	U.S. imports in 2018				
	South Africa	Spain	Subject sources	Nonsubject sources	All import sources
	Share imported by firm within source (percent)				
INEOS	***	***	***	***	***
Integra	***	***	***	***	***
KH Chemicals	***	***	***	***	***
LG Chem	***	***	***	***	***
Lucite	***	***	***	***	***
Mitsui	***	***	***	***	***
Monument	***	***	***	***	***
Oxyde	***	***	***	***	***
Plaza	***	***	***	***	***
Rohm and Haas	***	***	***	***	***
Sasol	***	***	***	***	***
Sumitomo	***	***	***	***	***
Total	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTS

Table IV-2 presents data for U.S. imports of acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, Spain and all other sources.[2] The quantity of acetone imports from all subject countries by increased 56.8 percent from 2016 to 2017 and by a further 67.5 percent from 2017 to 2018 for an overall increase of 153.1 percent. Imports increased during 2016 for each subject country, except South Africa. Korea accounted for the greatest increase by quantity, but Singapore accounted for the largest percentage increase. Unlike subject countries, the quantity of acetone from nonsubject countries fluctuated during the period of investigation: it increased from 2016 to 2017 by 83.8 percent but decreased from 2017 to 2018 by 63.8 percent. As a share of total imports, imports from the subject countries decreased by 1.7 percentage point from 2016 to 2017 but increased by 9.6 percentage points from 2017 to 2018.

The value of acetone imports from subject countries more than doubled from 2016 to 2018. The average unit value of imports from aggregate subject and nonsubject countries increased from 2016 to 2018 by 41.9 percent and 6.5 percent, respectively.

Table IV-2
Acetone: U.S. imports by source, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
U.S. imports from.--			
Belgium	33,670	49,626	69,176
Korea	25,944	55,688	99,491
Saudi Arabia	---	5,550	6,746
Singapore	2,761	4,403	13,546
South Africa	28,601	26,761	31,216
Spain	6,834	11,308	27,431
Subject sources	97,811	153,336	247,606
Subject sources less Saudi Arabia	97,811	147,786	240,860
Nonsubject sources	12,236	22,486	8,129
Nonsubject sources plus Saudi Arabia	12,236	28,036	14,875
All import sources	110,047	175,822	255,735
	Value (1,000 dollars)		
U.S. imports from.--			
Belgium	17,197	35,249	56,832
Korea	13,992	40,815	67,932
Saudi Arabia	---	3,845	4,817
Singapore	1,669	3,057	9,590
South Africa	14,675	19,414	24,938
Spain	3,319	7,762	18,576
Subject sources	50,853	110,141	182,684
Subject sources less Saudi Arabia	50,853	106,297	177,867
Nonsubject sources	8,847	18,125	6,258
Nonsubject sources plus Saudi Arabia	8,847	21,969	11,075
All import sources	59,700	128,266	188,943

Table continued on the next page.

Table IV-2-Continued
Acetone: U.S. imports by source, 2016-18

Item	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
U.S. imports from.--			
Belgium	511	710	822
Korea	539	733	683
Saudi Arabia	---	693	714
Singapore	605	694	708
South Africa	513	725	799
Spain	486	686	677
Subject sources	520	718	738
Subject sources less Saudi Arabia	520	719	738
Nonsubject sources	723	806	770
Nonsubject sources plus Saudi Arabia	723	784	745
All import sources	542	730	739
	Share of quantity (percent)		
U.S. imports from.--			
Belgium	30.6	28.2	27.0
Korea	23.6	31.7	38.9
Saudi Arabia	---	3.2	2.6
Singapore	2.5	2.5	5.3
South Africa	26.0	15.2	12.2
Spain	6.2	6.4	10.7
Subject sources	88.9	87.2	96.8
Subject sources less Saudi Arabia	88.9	84.1	94.2
Nonsubject sources	11.1	12.8	3.2
Nonsubject sources plus Saudi Arabia	11.1	15.9	5.8
All import sources	100.0	100.0	100.0

Table continued on next page.

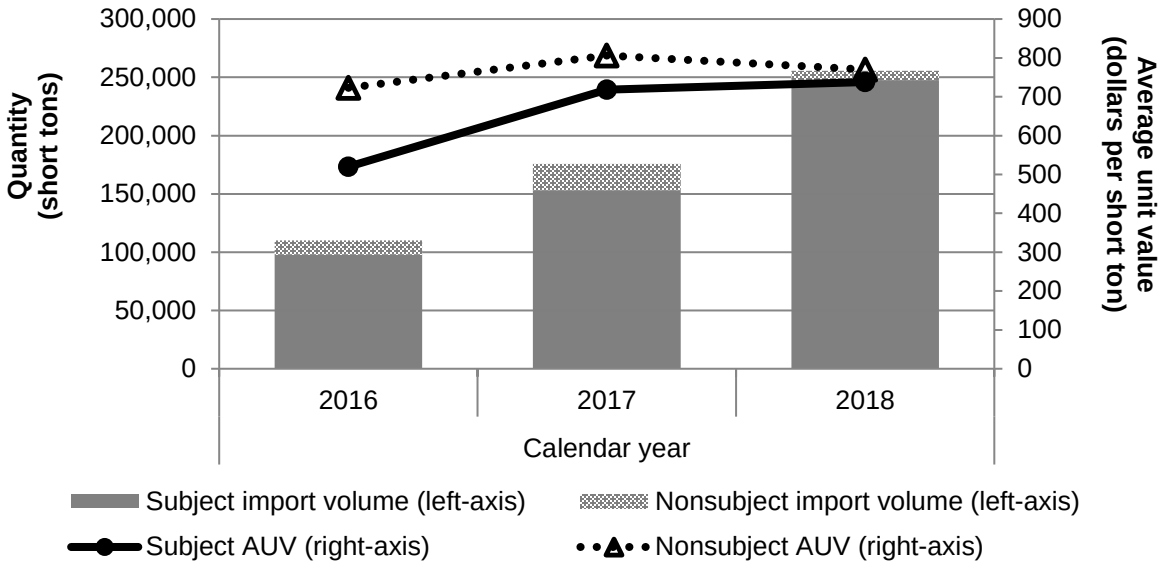
Table IV-2-Continued
Acetone: U.S. imports by source, 2016-18

Item	Calendar year		
	2016	2017	2018
	Share of value (percent)		
U.S. imports from.--			
Belgium	28.8	27.5	30.1
Korea	23.4	31.8	36.0
Saudi Arabia	---	3.0	2.5
Singapore	2.8	2.4	5.1
South Africa	24.6	15.1	13.2
Spain	5.6	6.1	9.8
Subject sources	85.2	85.9	96.7
Subject sources less Saudi Arabia	85.2	82.9	94.1
Nonsubject sources	14.8	14.1	3.3
Nonsubject sources plus Saudi Arabia	14.8	17.1	5.9
All import sources	100.0	100.0	100.0
	Ratio to U.S. production		
U.S. imports from.--			
Belgium	2.9	4.2	6.0
Korea	2.2	4.7	8.6
Saudi Arabia	---	0.5	0.6
Singapore	0.2	0.4	1.2
South Africa	2.4	2.2	2.7
Spain	0.6	0.9	2.4
Subject sources	8.4	12.8	21.4
Subject sources less Saudi Arabia	8.4	12.4	20.9
Nonsubject sources	1.0	1.9	0.7
Nonsubject sources plus Saudi Arabia	1.0	2.3	1.3
All import sources	9.4	14.7	22.1

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Figure IV-1
Acetone: U.S. import volumes and prices, 2016-18



Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[3] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[4]

Table IV-3 is based on official import statistics and presents the quantity of U.S. imports in the twelve-month period preceding the filing of the petitions (February 2018 through January 2019) and the share of quantity of total U.S. imports for which each subject country and nonsubject sources. Table IV-3 indicates U.S. imports from Belgium, Korea, Saudi Arabia,

[3] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[4] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Singapore, South Africa, and Spain accounted for 28.1 percent, 37.7 percent, 2.8 percent, 3.9 percent, 11.7 percent, 12.7 percent respectively, of total imports of acetone by quantity during February 2018 to January 2019.

Table IV-3
Acetone: U.S. imports in the twelve-month period preceding the filing of the petition, official statistics February 2018 through January 2019

Item	Official Statistics February 2018 through January 2019	
	Quantity (short tons)	Share quantity (percent)
U.S. imports from.--		
Belgium	68,757	28.1
Korea	92,290	37.7
Saudi Arabia	6,746	2.8
Singapore	9,437	3.9
South Africa	28,655	11.7
Spain	31,045	12.7
Subject sources	236,930	96.7
Nonsubject sources	8,150	3.3
All import sources	245,080	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Negligibility: Saudi Arabia

Table IV-4 and figure IV-2 present data for U.S. imports of acetone, based on quantity, from Saudi Arabia and from all sources in the twelve-month periods.

Table IV-4
Acetone: U.S. imports in the prior twelve-month period over two years preceding the filing of the petition, 2017-18

The twelve month period ending	Saudi Arabia	All import sources	Saudi Arabia	All import sources
	Quantity (short tons)		Share of all import sources (percent)	
2017.--				
December	5,550	175,822	3.2	100.0
2018.--				
January	5,550	196,092	2.8	100.0
February	5,550	196,502	2.8	100.0
March	5,550	223,201	2.5	100.0
April	10,072	231,286	4.4	100.0
May	10,072	231,922	4.3	100.0
June	10,072	237,158	4.2	100.0

Table continued on the next page.

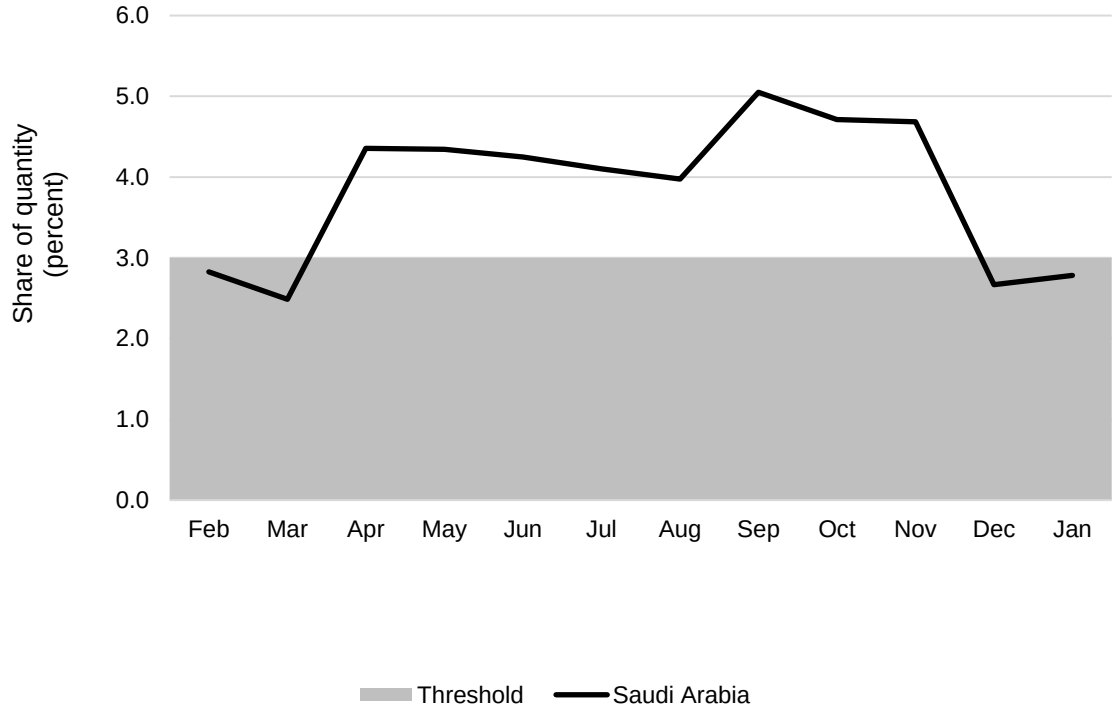
Table IV–4 Continued
Acetone: U.S. imports in the prior twelve-month period over two years preceding the filing of the petition, 2017-18

The twelve month period ending	Saudi Arabia	All import sources	Saudi Arabia	All import sources
	Quantity (short tons)		Share of all import sources (percent)	
July	10,072	245,604	4.1	100.0
August	10,072	253,310	4.0	100.0
September	12,296	243,501	5.0	100.0
October	12,296	260,977	4.7	100.0
November	12,296	262,474	4.7	100.0
December	6,746	255,735	2.7	100.0
2019.-- January	6,746	245,080	2.8	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Figure IV-2
Acetone: U.S. imports in the twelve-month period preceding the filing of the petition, 2017-18



Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

CUMULATION CONSIDERATIONS

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

At the conference, petitioners asserted that that the vast majority of acetone sold in the U.S. market is produced and marketed as a standard grade.[5] Standard grade acetone may undergo further testing and certification, either at the production facility or at the customer's facility, to meet specialty grade requirements.[6] However, petitioners stated that the market for specialty grade acetone is small accounting for approximately less than 2 percent of the total U.S. acetone market.[7] Both petitioners and respondents, except Sasol, contend that acetone is fungible regardless of source.

Standard and specialty grades

Table IV-5 and figure IV-3 present data for U.S. producers' and U.S. importers' U.S. shipment by product type for 2018. U.S. shipments by product type data are categorized by standard/technical grade acetone, and specialty grade acetone. For U.S. producers and U.S. importers from the subject countries, standard/technical grade acetone accounted for the largest for share (*** percent) of shipments in 2018. Imports from *** accounted for *** percent of all reported U.S. shipments of specialty grade acetone and it was the only subject country to report U.S. shipments of specialty grade acetone in 2018. In 2018, U.S. producers accounted for *** percent of U.S. shipments of specialty-grade acetone and *** percent of standard grade acetone.

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[5] Conference transcript, p. 22 (Stephenson).

[6] U.S. producer AdvanSix sells a National Formulary ("NF") grade and a low water grade for pharmaceutical applications, ***. ***. Petition, pp. 5-6. U.S. producers Olin and Altivia do not produce specialty grade acetone. Conference transcript, p. 65 (Duhe and Safar). ***.

Among importers, specialty grade shipments were reported only for imports from Korea. The South African producer Sasol stated that its benzene-free acetone is not a specialty grade but rather is a distinct product from acetone that is produced using cumene. Respondent Sasol's postconference brief, exh. 1, p. 2.

[7] Conference transcript, p. 27 (Stephenson).

Table IV-5
Acetone: U.S. producers' and U.S. importers' U.S. shipment by grade, 2018

* * * * * * *

Figure IV-3
Acetone: U.S. producers' and U.S. importers' U.S. shipments by grade, 2018

* * * * * * *

Cumene-based and non-cumene-based production process

Table IV-6 and figure IV-4 present data for U.S. producers' and U.S. importers' U.S. shipment by production process for 2018. U.S. shipments data can be categorized by whether the production process is cumene-based and non-cumene-based. Imports from South Africa accounted for *** percent of all reported U.S. shipments of non-cumene-based produced acetone and *** U.S. shipments of non-cumene-based produced acetone in 2018. Table IV-7 presents a list of Sasol's customers. At the conference, a representative from Sasol stated that its customers require benzene-free acetone.[8] ***

Table IV-6
Acetone: U.S. producers' and U.S. importers' U.S. shipment by production process, 2018

* * * * * * *

Figure IV-4
Acetone: U.S. producers' and U.S. importers' U.S. shipments by production process, 2018

* * * * * * *

Table IV-7
Acetone: Sasol's top 10 customers and competition with other suppliers in U.S. market, 2018.

* * * * * * *

[8] Conference transcript, p.138 (Thornlow).

Geographical markets

As illustrated in table IV-8, U.S. Customs districts located in the South[9] accounted for (by share of quantity) the largest share of the imports of acetone from the subject countries (86.7 percent) during 2018, followed by districts located in the East[10] accounting for 11.9 percent and then districts in the West[11] accounting for 0.3 percent based on quantities of imports. No imports of acetone from subject countries entered through the districts located in the North.[12] The overwhelming majority of subject imports from Belgium (100 percent), Korea (99.4 percent), Saudi Arabia (100 percent), Singapore (99.7 percent) and Spain (99.9 percent) arrived through ports of entry in the South in 2018. On the other hand, the vast majority of South Africa's imports (94.5 percent) entered through ports of entry in the East.

Table IV-8
Acetone: U.S. imports Customs district port of entry, 2018

Item	Border of entry				
	East	North	South	West	All borders
	Quantity (short tons)				
U.S. imports from.--					
Belgium	14	---	69,148	14	69,176
Korea	---	---	98,935	556	99,491
Saudi Arabia	---	---	6,746	---	6,746
Singapore	---	---	13,506	40	13,546
South Africa	29,494	---	1,694	28	31,216
Spain	40	---	27,391	---	27,431
Subject sources	29,548	---	217,420	638	247,606
Nonsubject sources	351	25	6,604	1,149	8,129
All import sources	29,899	25	224,023	1,787	255,735

Table continued on the next page.

[9] The "South" includes the following Customs entry districts: Dallas-Fort Worth, Texas; El Paso, Texas; Houston-Galveston, Texas; Laredo, Texas; Miami, Florida; Mobile, Alabama; New Orleans, Louisiana; and Tampa, Florida.

[10] The "East" includes the following Customs entry districts: Baltimore, Maryland; Boston, Massachusetts; Buffalo, New York; Charleston, South Carolina; Charlotte, North Carolina; New York, New York; Norfolk, Virginia; Ogdensburg, New York; Philadelphia, Pennsylvania; Portland, Maine; San Juan, Puerto Rico; Savannah, Georgia; St. Albans, Vermont; and Washington, District of Columbia.

[11] The "West" includes the following Customs entry districts: Columbia-Snake, Oregon; Honolulu, Hawaii; Los Angeles, California; Nogales, Arizona; San Diego, California; San Francisco, California; and Seattle, Washington.

[12] The "North" includes the following Customs entry districts: Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; Duluth, Minnesota; Great Falls, Montana; Milwaukee, Wisconsin; Minneapolis, Minnesota; and Pembina, North Dakota. The "South" includes the following Customs entry districts: Dallas-Fort Worth, Texas; El Paso, Texas; Houston-Galveston, Texas; Laredo, Texas; Miami, Florida; Mobile, Alabama; New Orleans, Louisiana; and Tampa, Florida.

Table IV-8-Continued
Acetone: U.S. imports Customs district port of entry, 2018

Item	Border of entry				
	East	North	South	West	All borders
	Share across (percent)				
U.S. imports from.--					
Belgium	0.0	---	100.0	0.0	100.0
Korea	---	---	99.4	0.6	100.0
Saudi Arabia	---	---	100.0	---	100.0
Singapore	---	---	99.7	0.3	100.0
South Africa	94.5	---	5.4	0.1	100.0
Spain	0.1	---	99.9	---	100.0
Subject sources	11.9	---	87.8	0.3	100.0
Nonsubject sources	4.3	0.3	81.2	14.1	100.0
All import sources	11.7	0.0	87.6	0.7	100.0
	Share down (percent)				
U.S. imports from.--					
Belgium	0.0	---	30.9	0.8	27.0
Korea	---	---	44.2	31.1	38.9
Saudi Arabia	---	---	3.0	---	2.6
Singapore	---	---	6.0	2.3	5.3
South Africa	98.6	---	0.8	1.6	12.2
Spain	0.1	---	12.2	---	10.7
Subject sources	98.8	---	97.1	35.7	96.8
Nonsubject sources	1.2	100.0	2.9	64.3	3.2
All import sources	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Presence in the market

Table IV-9, and figures IV-5 and IV-6 present monthly import statistics for acetone from January 2016 through December 2018.

Table IV-9
Acetone: Monthly U.S. imports, January 2016 through December 2018

Item	U.S. imports				
	Belgium	Korea	Saudi Arabia	Singapore	South Africa
	Quanitity (short tons)				
2016.-- January	5,652	6,811	---	---	1,984
February	3,471	3,915	---	---	1,012
March	---	3,214	---	---	2,656
April	3,840	---	---	---	2,953
May	5,514	---	---	---	2,333
June	---	3,166	---	---	2,434
July	2,700	1,657	---	---	2,477
August	3,098	548	---	2,761	2,466
September	---	---	---	---	2,206
October	3,369	3,307	---	---	2,548
November	3,705	3,327	---	---	2,550
December	2,321	---	---	---	2,982
2017.-- January	---	3,302	---	---	1,987
February	2,724	1,654	---	---	2,318
March	2,961	3,322	---	---	3,210
April	2,755	---	---	---	2,052
May	3,307	8,967	---	---	2,330
June	7,027	28	---	---	1,663
July	4,298	4,976	---	---	1,580
August	4,293	4,967	---	---	2,266
September	8,631	5,794	---	---	2,730
October	4,902	6,713	---	---	3,756
November	---	8,190	---	2,206	2,868
December	8,727	7,773	5,550	2,197	---

Table continued on next page.

Table IV-9-Continued
Acetone: Monthly U.S. imports, January 2016 through December 2018

Item	U.S. imports				
	Belgium	Korea	Saudi Arabia	Singapore	South Africa
	Quanitity (short tons)				
2018.-- January	7,053	12,323	---	6,728	4,980
February	---	4,476	---	---	2,546
March	14,333	18,691	---	---	783
April	4,133	2,127	4,522	1,574	2,220
May	---	12,841	---	---	2,325
June	6,439	3,484	---	5	2,571
July	6,999	2,892	---	---	4,852
August	3,526	8,245	---	---	2,660
September	2,271	2,203	2,224	---	2,800
October	10,087	15,924	---	---	2,539
November	6,671	10,212	---	2,346	63
December	7,663	6,072	---	2,894	2,879

Table continued on the next page.

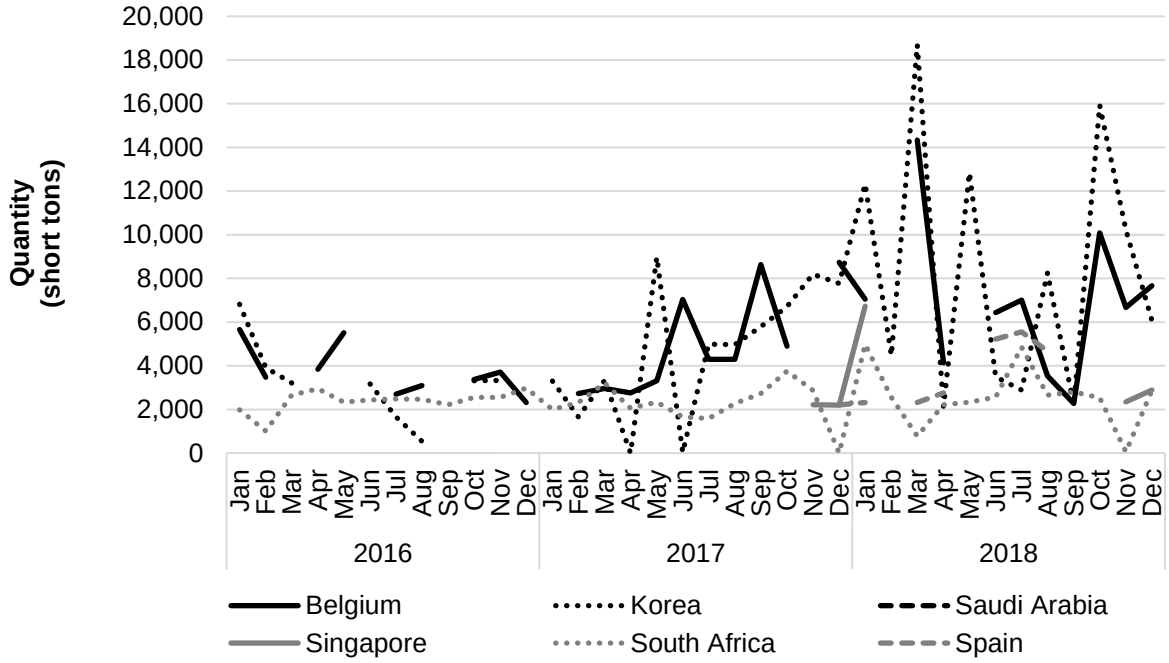
Table IV-9
Acetone: Monthly U.S. imports, January 2016 through December 2018

Item	U.S. imports from			
	Spain	Subject sources	Nonsubject sources	All import sources
	Quanitity (short tons)			
2016.-- January	2,316	16,763	39	16,801
February	---	8,398	34	8,431
March	2,314	8,184	145	8,329
April	---	6,793	50	6,843
May	---	7,847	30	7,877
June	---	5,600	16	5,616
July	---	6,834	93	6,927
August	2,205	11,077	1,740	12,817
September	---	2,206	9,752	11,958
October	---	9,223	37	9,260
November	---	9,582	142	9,724
December	---	5,303	159	5,462
2017.-- January	2,317	7,607	5,692	13,299
February	---	6,696	3	6,700
March	---	9,493	44	9,537
April	2,204	7,011	2,277	9,288
May	---	14,605	32	14,637
June	---	8,719	6,804	15,523
July	2,314	13,168	2,339	15,507
August	---	11,527	62	11,589
September	2,269	19,424	64	19,488
October	---	15,371	463	15,834
November	---	13,264	4,608	17,872
December	2,205	26,452	96	26,548
2018.-- January	2,315	33,398	170	33,569
February	---	7,022	88	7,110
March	2,314	36,121	115	36,236
April	2,756	17,331	42	17,374
May	---	15,166	107	15,272
June	5,210	17,709	3,050	20,759
July	5,551	20,293	3,660	23,953
August	4,656	19,088	208	19,296
September	---	9,498	181	9,679
October	4,629	33,179	131	33,310
November	---	19,293	76	19,369
December	---	19,508	300	19,809

Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Figure IV-5

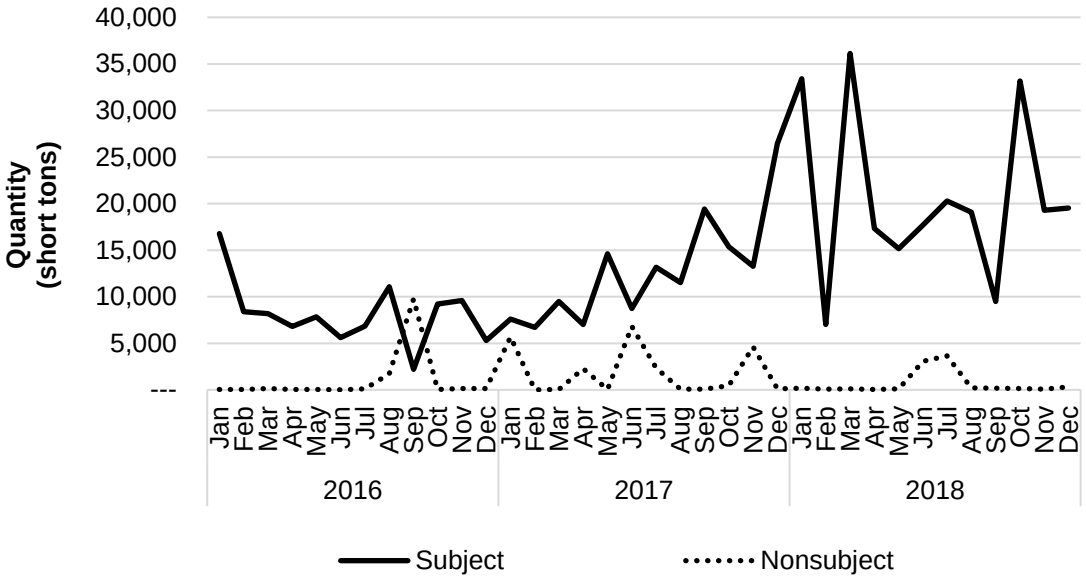
Acetone: Monthly U.S. imports from individual subject countries, January 2016 through December 2018



Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Figure IV-6

Acetone: Monthly U.S. imports from subject sources and nonsubject sources, January 2016 through December 2018



Source: Official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

APPARENT U.S. CONSUMPTION

Table IV-10 and figure IV-7 present data on apparent U.S. consumption for acetone during 2016-18. Apparent U.S. consumption based on quantity increased by 4.0 percent from 2016 to 2017 and continued to increase by 8.4 percent from 2017 to 2018, for an overall increase of 12.7 percent during 2016 to 2018. U.S. producers' shipments increase irregularly by 0.5 percent over 2016 to 2018. U.S. imports based on quantity from subject sources increased by 56.8 percent from 2016 to 2017, and further increased by 61.5 percent from 2017 to 2018 for an overall increase of 153.1 percent. Due to generally rising average unit values, apparent consumption based on value increased by 57.5 percent from 2016 to 2018.

Table IV-10
Acetone: Apparent U.S. consumption, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
U.S. producers' U.S. shipments	1,080,430	1,061,774	1,085,547
U.S. imports from.--			
Belgium	33,670	49,626	69,176
Korea	25,944	55,688	99,491
Saudi Arabia	---	5,550	6,746
Singapore	2,761	4,403	13,546
South Africa	28,601	26,761	31,216
Spain	6,834	11,308	27,431
Subject sources	97,811	153,336	247,606
Subject sources less Saudi Arabia	97,811	147,786	240,860
Nonsubject sources	12,236	22,486	8,129
Nonsubject sources plus Saudi Arabia	12,236	28,036	14,875
All import sources	110,047	175,822	255,735
Apparent U.S. consumption	1,190,477	1,237,596	1,341,282

Table continued on the next page.

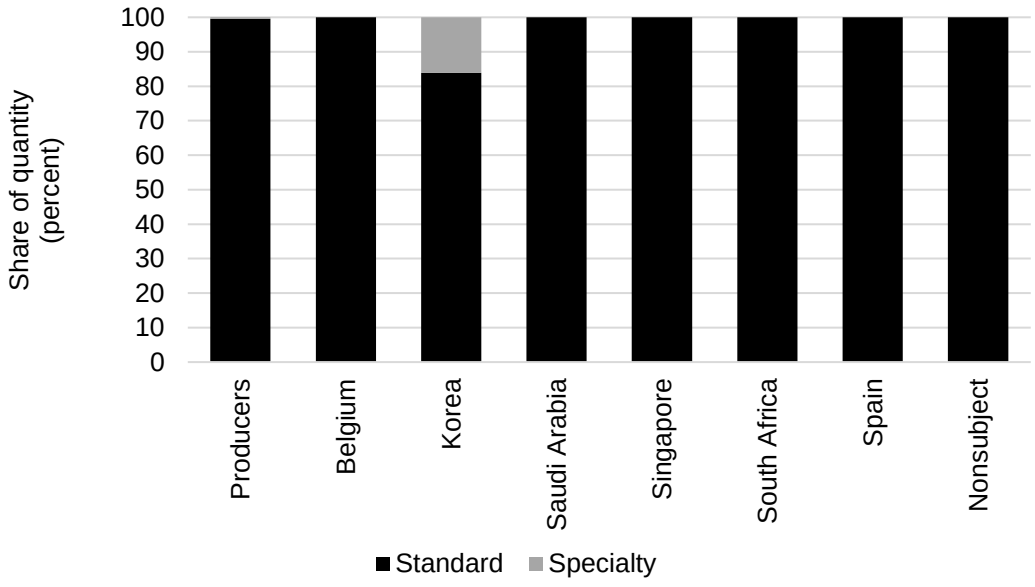
Table IV-10--Continued
Acetone: Apparent U.S. consumption, 2016-18

Item	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
U.S. producers' U.S. shipments	613,303	841,609	871,113
U.S. imports from.--			
Belgium	17,197	35,249	56,832
Korea	13,992	40,815	67,932
Saudi Arabia	---	3,845	4,817
Singapore	1,669	3,057	9,590
South Africa	14,675	19,414	24,938
Spain	3,319	7,762	18,576
Subject sources	50,853	110,141	182,684
Subject sources less Saudi Arabia	50,853	106,297	177,867
Nonsubject sources	8,847	18,125	6,258
Nonsubject sources plus Saudi Arabia	8,847	21,969	11,075
All import sources	59,700	128,266	188,943
Apparent U.S. consumption	673,003	969,875	1,060,056

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Figure IV-7
Acetone: Apparent U.S. consumption, 2016-18



Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

U.S. MARKET SHARES

U.S. market share data are presented in table IV-11 from 2016 to 2018. These data show that U.S. producers' market share based on quantity decreased by 9.9 percentage points from 2016 to 2018. U.S. producer's market share based on value, decreased by 2.5 percentage points from 2016 to 2018. During this period, the market share based on quantity of imports of acetone from subject countries increased by 10.3 percentage points, while the market share for nonsubject sources decreased by 0.4 percentage points.

Table IV-11
Acetone: U.S. consumption and market shares, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Apparent U.S. consumption	1,190,477	1,237,596	1,341,282
	Share of quantity (percent)		
U.S. producers' U.S. shipments	90.8	85.8	80.9
U.S. imports from.--			
Belgium	2.8	4.0	5.2
Korea	2.2	4.5	7.4
Saudi Arabia	---	0.4	0.5
Singapore	0.2	0.4	1.0
South Africa	2.4	2.2	2.3
Spain	0.6	0.9	2.0
Subject sources	8.2	12.4	18.5
Subject sources less Saudi Arabia	8.2	11.9	8.0
Nonsubject sources	1.0	1.8	0.6
Nonsubject sources plus Saudi Arabia	1.0	2.3	1.1
All import sources	9.2	14.2	19.1
	Value (1,000 dollars)		
Apparent U.S. consumption	673,003	969,875	1,060,056
	Share of value (percent)		
U.S. producers' U.S. shipments	91.1	86.8	82.2
U.S. imports from.--			
Belgium	2.6	3.6	5.4
Korea	2.1	4.2	6.4
Saudi Arabia	---	0.4	0.5
Singapore	0.2	0.3	0.9
South Africa	2.2	2.0	2.4
Spain	0.5	0.8	1.8
Subject sources	7.6	11.4	17.2
Subject sources less Saudi Arabia	7.6	11.0	16.8
Nonsubject sources	1.3	1.9	0.6
Nonsubject sources plus Saudi Arabia	1.3	2.3	1.0
All import sources	8.9	13.2	17.8

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

During 2016-18, U.S. producers' raw materials' share of the cost of goods sold increased from 78.1 percent to 85.0 percent. Cumene, which is formed from benzene and propylene, is the main input in the vast majority of acetone production in the United States.[1] One responding U.S. producer (***) reported producing cumene and five reported purchasing cumene (see Part VI).

The cumene peroxidation process produces acetone, as well as another chemical, phenol. Benchmark prices of acetone are based on the contained propylene whereas benchmark prices of phenol are based on the contained benzene.[2] Refinery grade propylene ("RGP") is the basis for these prices.[3] *** stated that acetone prices are targeted to have a certain margin range over raw material costs. Petitioners stated that the price of acetone was lower than the contained propylene value in the second half of 2018, and that propylene prices are likely to increase in 2019.[4] RGP price increases over the past year have been driven by propylene production issues, but prices have come down recently as propylene production facilities have come back online.[5] RGP and cumene prices are shown in figure V-1.

Figure V-1
Raw materials: Prices for RGP and cumene, monthly, 2016-18

* * * * * * *

Three U.S. producers reported that raw material prices have increased since January 1, 2016, and three reported that they have fluctuated. *** reported that RGP prices increased in 2018. *** reported that increased raw material costs combined with increased low-priced imports have led customers to place more spot sales orders instead of entering into contracts. *** reported a steady increase in cost of the propylene component of cumene from 2016 to 2018. *** reported that raw material prices fluctuate based on propylene and that in 2018, acetone prices were at a peak due to high U.S. propylene prices.

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[1] As discussed in Part I, acetone is also produced using other methods. The vast majority of U.S. production, including *** responding U.S. producers ***, uses the cumene peroxidation method. Approximately *** percent of domestic capacity for acetone is allocated to the IPA hydrogenation method and *** percent is allocated to other production methods. Petition, p. 7.

[2] Petition, pp. 16-17.

[3] Conference transcript, p. 34 (Duhe).

[4] Petition, p. 32.

[5] Conference transcript, p. 81 (Duhe).

Eight importers reported fluctuating raw material prices, two reported increases, and two reported decreases. Many importers noted the impact of RGP prices on acetone prices. *** stated that regional propylene prices have fluctuated, and that acetone prices have followed those fluctuations. *** stated that the Large Buyer Price ("LBP") - a metric for measuring acetone prices discussed later in this section - is a function of RGP, and that the distribution market for acetone follows the LBP trend. *** stated that acetone pricing is largely dictated by the RGP price, and *** stated that the published RGP monthly price, an average of reported spot transactions, increased in 2018.[6] *** reported decreasing benzene and propylene prices in 2019 because of oversupply and high inventory.[7] *** stated that benzene prices increased greatly in 2017, but have decreased since early 2018 to below prices in early 2016. It further stated that propylene prices in the United States experienced large fluctuations, but increased overall from 2016 to the third quarter of 2018, becoming more expensive than the rest of the world, but have since returned to 2016 levels. *** stated that RGP prices increased for part of 2018, but toward the end of the year, the difference between acetone and RGP returned to 2016 levels.

Transportation costs to the U.S. market

Transportation costs for acetone shipped from subject countries to the United States averaged 8.4 percent during 2018. These estimates were derived from official import data and represent the transportation and other charges on imports.[8]

U.S. inland transportation costs

Three of 6 responding U.S. producers and 7 of 8 responding importers reported that they typically arrange transportation to their customers. Most U.S. producers reported that their U.S. inland transportation costs ranged from 3 to 5 percent, although *** reported costs

[6] *** stated that in 2018, a large volume of low-priced RGP transactions were not included in the published RGP price, causing a large increase in the published RGP price. It explained that, in 2018, about 40 percent of RGP purchases were made by contract by a large buyer that had previously made spot purchases. Since contract purchases are not included in the published RGP price, this large buyer's low-priced transactions were not included in the RGP benchmark price in 2018.

[7] It cited RGP prices published by ICIS of $802 in the first half of 2018, $875 in the second half of the year, and $576 in the first two months of 2019. It also stated that Platt's prices for benzene decreased from $897 in the first half of 2018 to $765 in the second half of the year and $576 in the first two months of 2019.

[8] Such costs were 5.7 percent for Belgium, 10.7 percent for Korea, 16.2 percent for Saudi Arabia, 13.2 percent for Singapore, 10.3 percent for South Africa, and 1.5 percent for Spain. The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2018 and then dividing by the customs value based on the HTS subheading 7303.00.0030.

of *** percent. Importers reported more varied costs, with two firms reporting less than 2 percent, one (***) reporting 8 percent, and one (***) reporting 13 percent.

PRICING PRACTICES

Pricing methods

Prices for most acetone sales in the U.S. market, both contract sales and spot sales, are based on a negotiated discount off the LBP, an index published by ICIS. Another method of setting prices starts with the price of RGP plus adjustments for the amount of acetone produced, conversion costs, and profit.[9] Industry publications also publish other acetone pricing indices, such as a small buyer price, which are less commonly used to set acetone prices.[10] Small buyers typically purchase truckload or smaller quantities compared to large buyers that purchase barge loads.[11]

The LBP is negotiated by three purchasers that produce MMA (Dow, Lucite, and Evonik) and two U.S. producers (INEOS Americas and Shell).[12] The LBP is not the actual price paid by these purchasers, but a starting point for price negotiations.[13] *** stated that they use the LBP as a basis for acetone prices and *** also uses the RGP price.

Petitioners stated that discounts off the LBP increased in 2018 and 2019 for both spot and contract sales.[14] In questionnaire responses, all six U.S. producers indicated that the discount from published acetone prices had changed since January 1, 2016. *** stated that its average discount to spot buyers decreased from *** percent in 2016 to *** percent in 2017, and then increased to *** percent in 2018. ***. ***.[15] *** also reported that discounts from the monthly MMA published price have increased. *** stated that its contract discounts to published prices have fluctuated with supply/demand for acetone, but that in 2018, contracts being negotiated beginning in 2019 had a steep increase in the discount. Its average discount

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[9] Petitioners' postconference brief, p. 18, and petition, p. 21, footnote 52. ICIS publishes monthly contract and weekly spot prices for acetone. For contract prices, these include an MMA barge price, U.S. Gulf truck price, and Midwest truck price. Spot prices are for CFR Houston. ICIS Acetone Methodology, June 29, 2018, https://s3-eu-west-1.amazonaws.com/cjp-rbi-icis-compliance/wp-content/uploads/2018/06/29134207/Acetone-Methodology-29-June-2018.pdf.

[10] Conference transcript, pp. 80-81 (Sanders, Duhe, Safar).

[11] Conference transcript, pp. 73 (Duhe).

[12] These parties begin discussions in the third week of the month and negotiate prices based on raw materials, supply and demand, and market conditions, and then when a price is agreed upon, typically in the fourth week of the month, the price is reported to IHS and ICIS. Respondent INEOS' postconference brief, p. exh. 1, p. 3. ***. Respondent Lucite's postconference brief, p. 4.

[13] Conference transcript, pp. 34-35 (Duhe).

[14] In addition, the adder over RGP has declined. Conference transcript, pp. 35-36 (Duhe).

[15] In addition to increased discounts, *** also stated that the LBP decreased in 2018. It stated that the absolute margin over contained raw materials (in cents per pound) was 9.6 in 2016, 12.2 in 2017, and 8.8 in 2018.

for contracts increased from *** percent in 2018 to *** percent in 2019. In contrast, *** stated that there has not been a significant change in discounts since 2016.

Figure V-2 presents published prices for the LBP, small buyer price, and the LBP price less the price of contained RGP.[16]

Figure V-2
Acetone: Large buyer price, small buyer price, and large buyer price less contained RGP, monthly, 2016-18

* * * * * * *

U.S. producers and importers reported using both transaction-by-transaction negotiations and contracts to set acetone prices (table V-1). U.S. producers and importers reported selling most of their acetone under annual and long-term contracts (table V-2). Five U.S. producers reported long-term contract sales in 2018, ranging from 50 to 100 percent of their sales in that year and the remaining producer (***) reported that most of its 2018 sales were under annual contracts. Among importers, one firm (***) reported that *** of its sales were on a long-term contract basis in 2018, three firms (***) reported mainly annual-contract sales, and five firms reported mainly spot sales.[17]

Table V-1
Acetone: U.S. producers' and importers' reported price setting methods, by number of responding firms[1]

Method	U.S. producers	Importers
Transaction-by-transaction	5	9
Contract	6	5
Set price list	---	---
Other	1	1
Responding firms	6	9

[1] The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

[16] Note that since the LBP does not reflect the actual price paid by the large buyers, the gap between the published LBP and small buyer price is not reflective of actual prices paid. The small buyer price is reflective of actual market prices for these buyers since it is obtained from the publications calling market participants and asking for transaction prices. Conference transcript, pp. 73-74 (Duhe, Szamosszegi, Anderson).

[17] The remaining three responding importers do not resell acetone. ***.

Table V-2
Acetone: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2018

Type of sale	U.S. producers	Importers
Long-term contracts	64.0	***
Annual contracts	21.2	***
Short-term contracts	2.3	***
Spot sales	12.6	***
Total	100.0	100.0

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to Commission questionnaires.

Five U.S. producers reported that their long-term contracts averaged two years in duration and one producer (***) reported a duration of *** years. Four responding U.S. producers reported that prices can be renegotiated during a long-term contract. Contract negotiations typically occur annually, during the fourth quarter of the year, and include negotiations of the percent discount from the LBP.[18] INEOS stated that acetone from any source can be delivered under the same contract at the same price to its customers, and that it sells its U.S.-produced acetone and acetone imported from its related firm in Belgium at the same price.[19]

Sales terms and discounts

Most U.S. producers typically quote prices on an f.o.b. basis while most importers typically quote prices on a delivered basis. Four U.S. producers reported typically using quantity and/or total volume discounts, and two U.S. producers reported maintaining no discount policy. Eight importers reported no discount policy and three importers reported volume or other discounts.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following acetone products shipped to unrelated U.S. customers during 2016-18.

[18] Conference transcript, pp. 60-62 (Anderson, Duhe).
[19] Conference transcript, p. 134 (Foster).

Product 1.-- Standard grade acetone, sold in bulk to distributors, spot/short-term contract sales.

Product 2.-- Standard grade acetone, sold in bulk to distributors, annual/long-term contract sales.

Product 3.-- Standard grade acetone, sold in bulk to end users, spot/short-term contract sales.

Product 4.-- Standard grade acetone, sold in bulk to end users, annual/long-term contract sales.

Six U.S. producers and nine importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[20] Pricing data reported by these firms accounted for more than 99 percent of U.S. producers' commercial shipments and commercial shipments of imports from each subject country. Price data for products 1-4 are presented in tables V-3 to V-6 and figures V-3 to V-6.[21]

[20] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[21] Petitioners stated the ***. Petitioners' postconference brief, pp. 8-9. ***.

Respondents identified issues with *** price data. Respondents' postconference brief on Common Issues, pp. 27-28. ***.

Table V-3
Acetone: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, 2016-18

Period	United States		Belgium			
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	
2016:						
Jan.-Mar.	486	34,133	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	642	26,174	***	***	***	
Oct.-Dec.	628	26,086	***	***	***	
2017:						
Jan.-Mar.	***	***	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	***	***	***	***	***	
Oct.-Dec.	881	25,056	***	***	***	
2018:						
Jan.-Mar.	***	***	***	***	***	
Apr.-Jun.	711	34,387	***	***	***	
Jul.-Sep.	720	34,439	***	***	***	
Oct.-Dec.	549	63,853	***	***	***	

Period	Korea			Saudi Arabia		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2017:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2018:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***

[1] Product 1: Standard grade acetone, sold in bulk to distributors, spot/short-term contract sales.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-3—Continued
Acetone: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, 2016-18

Period	United States		Singapore			
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	
2016:						
Jan.-Mar.	486	34,133	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	642	26,174	***	***	***	
Oct.-Dec.	628	26,086	***	***	***	
2017:						
Jan.-Mar.	***	***	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	***	***	***	***	***	
Oct.-Dec.	881	25,056	***	***	***	
2018:						
Jan.-Mar.	***	***	***	***	***	
Apr.-Jun.	711	34,387	***	***	***	
Jul.-Sep.	720	34,439	***	***	***	
Oct.-Dec.	549	63,853	***	***	***	

Period	South Africa			Spain		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2017:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2018:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***

[1] Product 1: Standard grade acetone, sold in bulk to distributors, spot/short-term contract sales.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-4
Acetone: Weighted-average f.o.b. prices and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, 2016-18

Period	United States		Belgium			
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	
2016:						
Jan.-Mar.	500	38,826	***	***	***	
Apr.-Jun.	505	39,793	***	***	***	
Jul.-Sep.	621	36,426	***	***	***	
Oct.-Dec.	669	34,641	***	***	***	
2017:						
Jan.-Mar.	760	35,652	***	***	***	
Apr.-Jun.	787	35,801	***	***	***	
Jul.-Sep.	716	35,146	***	***	***	
Oct.-Dec.	904	40,093	***	***	***	
2018:						
Jan.-Mar.	723	37,649	***	***	***	
Apr.-Jun.	770	29,232	***	***	***	
Jul.-Sep.	868	22,910	***	***	***	
Oct.-Dec.	728	24,253	***	***	***	
	Korea			**Singapore**		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2017:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2018:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***

[1] Product 2: Standard grade acetone, sold in bulk to distributors, annual/long-term contract sales.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5
Acetone: Weighted-average f.o.b. prices and quantities of domestic and imported product 3[1] and margins of underselling/(overselling), by quarters, 2016-18

Period	United States		Belgium			
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	
2016:						
Jan.-Mar.	559	19,242	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	659	17,437	***	***	***	
Oct.-Dec.	***	***	***	***	***	
2017:						
Jan.-Mar.	842	10,939	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	***	***	***	***	***	
Oct.-Dec.	974	13,372	***	***	***	
2018:						
Jan.-Mar.	***	***	***	***	***	
Apr.-Jun.	***	***	***	***	***	
Jul.-Sep.	866	21,921	***	***	***	
Oct.-Dec.	788	17,406	***	***	***	

Period	Korea			Singapore		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2017:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2018:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***

[1] Product 3: Standard grade acetone, sold in bulk to end users, spot/short-term contract sales.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-6
Acetone: Weighted-average f.o.b. prices and quantities of domestic and imported product 4[1] and margins of underselling/(overselling), by quarters, 2016-18

Period	United States		Belgium			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:								
Jan.-Mar.	465	188,316	***	***	***	***	***	***
Apr.-Jun.	499	202,951	***	***	***	***	***	***
Jul.-Sep.	579	206,441	***	***	***	***	***	***
Oct.-Dec.	606	165,268	***	***	***	***	***	***
2017:								
Jan.-Mar.	762	208,880	***	***	***	***	***	***
Apr.-Jun.	733	195,736	***	***	***	***	***	***
Jul.-Sep.	702	184,847	***	***	***	***	***	***
Oct.-Dec.	834	193,354	***	***	***	***	***	***
2018:								
Jan.-Mar.	775	191,980	***	***	***	***	***	***
Apr.-Jun.	804	199,919	***	***	***	***	***	***
Jul.-Sep.	895	197,389	***	***	***	***	***	***
Oct.-Dec.	747	171,680	***	***	***	***	***	***

	Singapore			South Africa		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2016:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2017:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***
2018:						
Jan.-Mar.	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***

[1] Product 4: Standard grade acetone, sold in bulk to end users, annual/long-term contract sales.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-3
Acetone: Weighted-average prices and quantities of domestic and imported product 1, by quarters, 2016-18

* * * * * * *

Figure V-4
Acetone: Weighted-average prices and quantities of domestic and imported product 2, by quarters, 2016-18

* * * * * * *

Figure V-5
Acetone: Weighted-average prices and quantities of domestic and imported product 3, by quarters, 2016-18

* * * * * * *

Figure V-6
Acetone: Weighted-average prices and quantities of domestic and imported product 4, by quarters, 2016-18

* * * * * * *

Price trends

In general, prices increased during 2016-18. U.S. producers' prices generally increased in 2016 and 2017 and decreased in January-March 2018. In the second quarter of 2018, U.S. producers' spot and contract prices diverged, with spot/short-term contract prices (products 1 and 3) continuing to decline and annual/long-term contract prices increasing. All four pricing products showed price increases in third quarter 2018 and decreases in the fourth quarter of 2018. Most of U.S. producers' pricing data (71 percent) were reported as product 4 (annual/long term contract sales to end users), as were most data for Belgium (*** percent) and a majority for South Africa (*** percent). However, product 4 represented a small share of pricing product volumes for Korea and Singapore (*** percent each), and *** percent for both Saudi Arabia and Spain.

Table V-7 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from 12.9 to 60.6 percent during 2016-18 while subject import price increases ranged from *** to *** percent.

Table V-7
Acetone: Summary of weighted-average f.o.b. prices for products 1-4 from the United States and subject countries

Item	Number of quarters	Low price (dollars per short ton)	High price (dollars per short ton)	Change in price over period[1] (percent)
Product 1:				
United States	12	***	***	12.9
Belgium	7	***	***	***
Korea	12	***	***	***
Saudi Arabia	1	***	***	***
Singapore	6	***	***	***
South Africa	12	***	***	***
Spain	12	***	***	***
Product 2:				
United States	12	486	890	45.5
Belgium	1	***	***	***
Korea	12	***	***	***
Singapore	3	***	***	***
Product 3:				
United States	12	559	974	41.0
Belgium	3	***	***	***
Korea	9	***	***	***
Singapore	1	***	***	***
Product 4:				
United States	12	465	895	60.6
Belgium	12	***	***	***
Korea	9	***	***	***
Singapore	1	***	***	***
South Africa	12	***	***	***

[1] Percentage change from the first quarter in which data were available to the last quarter in which price data were available.

Source: Compiled from data submitted in response to Commission questionnaires.

Price comparisons

As shown in table V-8, prices for acetone imported from subject countries were below those for U.S.-produced product in 55 of 113 instances (*** short tons); margins of underselling ranged from 0.3 to 38.8 percent. In the remaining 58 instances (183,489 short tons), prices for acetone from subject countries were between 0.1 and 57.0 percent above prices for the domestic product. Underselling patterns varied by subject country, with Korea having the most instances and highest volume of underselling. Belgium, Singapore, South Africa, and Spain had more instances, and higher volumes, of overselling than underselling.

Table V-8
Acetone: Instances of underselling/overselling and the range and average of margins, by country, 2016-18

Source	Underselling				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin Range (percent)	
				Min	Max
Product 1	24	***	***	***	***
Product 2	9	***	***	***	***
Product 3	11	***	***	***	***
Product 4	11	***	***	***	***
Total, underselling	55	***	***	0.3	38.8
Belgium	11	***	***	***	***
Korea	28	***	***	***	***
Saudi Arabia	1	***	***	***	***
Singapore	4	***	***	***	***
South Africa	6	***	***	***	***
Spain	5	***	***	***	***
Total, underselling	55	***	***	0.3	38.8
Total, underselling less Saudi Arabia	54	181,145	10.6	0.3	38.8
Source	(Overselling)				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin Range (percent)	
				Min	Max
Product 1	26	***	***	***	***
Product 2	7	***	***	***	***
Product 3	2	***	***	***	***
Product 4	23	***	***	***	***
Total, overselling	58	183,489	(10.7)	(0.1)	(57.0)
Belgium	12	***	***	***	***
Korea	14	***	***	***	***
Saudi Arabia	---	***	***	***	***
Singapore	7	***	***	***	***
South Africa	18	***	***	***	***
Spain	7	***	***	***	***
Total, overselling	58	183,489	(10.7)	(0.1)	(57.0)
Total, overselling less Saudi Arabia	58	183,489	(10.7)	(0.1)	(57.0)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source: Compiled from data submitted in response to Commission questionnaires.

LOST SALES AND LOST REVENUE

Of the six responding U.S. producers, four reported that they had to reduce prices, one reported that it had to roll back announced price increases, and three reported that they had lost sales. *** petitioning U.S. producers submitted lost sales and lost revenue ("LSLR") allegations, identifying 20 firms where they lost sales or revenue (two consisting of lost sales allegations, four consisting of lost revenue allegations, and 23 consisting of both types of allegations).[22] Each subject country was identified in at least one allegation.

Twenty firms provided LSLR survey responses, including 18 of the firms listed in the allegations and two other firms.[23] Responding purchasers reported purchasing and importing a combined 3.4 million short tons of acetone during 2016-18 (table V-9).

During 2018, responding purchasers purchased and imported 84.4 percent of their acetone from U.S. producers, 11.0 percent from subject countries, 0.3 percent from nonsubject countries, and 4.3 percent from "unknown" sources. Of the responding purchasers, three reported decreasing purchases from domestic producers, five reported increasing purchases, six reported no change, and four reported fluctuating purchases.[24] Among the three purchasers reporting decreased purchases from U.S. producers, *** stated it was placed on allocation by U.S. producers; *** stated that it lost ***; and *** stated ***.

Firms provided various explanations for increased purchases of subject imports. ***.[25] *** stated that it increased purchases from *** because U.S. producers refused to sell on terms ***. *** reported increased purchases from *** to make up for volumes that the domestic industry refused to sell, and to diversify its supply chain to insulate from domestic supply disruptions and allocations. *** reported increased purchases from Korea in 2019 "to explore competitive pricing." *** stated that increased purchases from South Africa resulted from an "occasional better competitive position."

*** decreased purchases from Spain because its prices increased compared to other sources. *** reported fluctuating purchases from ***, and a *** to supplement its purchases from U.S. producers, stating that U.S. acetone production is not sufficient to meet demand. ***, stating that these global suppliers could provide the quantity it needed.

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[22] Several of the firms were listed by more than one U.S. producer, hence the number of allegations is greater than the number of firms. ***.

[23] Two additional purchasers that were not named in LSLR allegations also completed the survey: ***.

[24] All 20 responding purchasers reported purchasing domestic product. Eleven purchasers indicated that they did not know the country of origin for some of the acetone they purchased.

[25] It stated that ***. ***.

Table V-9
Acetone: Purchasers' responses to purchasing patterns

Purchaser	Purchases and imports in January 2016 through December 2018 (short tons)			Change in domestic share[2] (pp, 2016-18)	Change in subject country share[2] (pp, 2016-18)
	Domestic	Subject	All other[1]		
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	2,981,203	261,914	185,827	(3.5)	5.9

[1] Includes all other sources and unknown sources.
[2] Percentage points (pp) change: Change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

Source: Compiled from data submitted in response to Commission questionnaires.

Of the 20 responding purchasers, 11 reported that, since 2016, they had purchased imported acetone from subject countries instead of U.S.-produced product. Six of these purchasers reported that subject import prices were lower than U.S.-produced product, and five of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Seven purchasers estimated the quantity of acetone from subject countries purchased instead of domestic product; quantities ranged from *** short tons to *** short tons (tables V-10 and V-11). Purchasers identified a number of non-price reasons for purchasing imported rather than U.S.-produced product: multi-supplier global strategy, refusal of domestic firms to sell, supply security, diversification of supply base, and flexibility to supply on short notice.

Of the 20 responding purchasers, five reported that U.S. producers had reduced prices in order to compete with lower-priced imports from subject countries (tables V-12 and V-13; 12 reported that they did not know). The reported estimated price reduction ranged from 6.9 to 20.0 percent.

Table V-10
Acetone: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Purchaser	Subject imports purchased instead of domestic (Y/N)	Imports priced lower (Y/N)	If purchased subject imports instead of domestic, was price a primary reason?		
			Y/N	If Yes, quantity (short tons)	If No, non-price reason
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	Yes--11; No--7	Yes--6; No--5	Yes--5; No--5	77,512	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-11
Acetone: Purchasers' responses to purchasing subject imports instead of domestic product, by country

Source	Count of purchasers reporting subject instead of domestic	Count of purchasers reported that imports were priced lower	Count of purchasers reporting that price was a primary reason for shift	Quantity (short tons)
Belgium	2	1	---	***
Korea	6	4	3	***
Saudi Arabia	1	1	---	***
Singapore	2	2	2	***
South Africa	3	1	1	***
Spain	2	1	1	***
All subject sources	11	6	5	77,512

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-12
Acetone: Purchasers' responses to U.S. producer price reductions, by firm

Purchaser	Producers reduced price (Y/N)	If producer reduced prices:	
		Estimated U.S. price reduction (percent)	Additional information, if available
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total/ average	Yes--5; No--2	14.0	

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-13
Acetone: Purchasers' responses to U.S. producer price reductions, by country

Source	Count of purchasers reporting U.S. producers reduced prices	Simple average of estimated U.S. price reduction (percent)	Range of estimated U.S. price reductions (percent)
Belgium	1	20.0	***
Korea	5	13.8	***
Saudi Arabia	2	14.0	***
Singapore	2	17.5	***
South Africa	2	11.5	***
Spain	2	14.0	***
All subject sources	5	14.0	6.9 - 20.0

Source: Compiled from data submitted in response to Commission questionnaires.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

The financial results of five U.S. producers of acetone are presented in this section of the report.[1,2] With the exception of *** and ***, which reported on the basis of International Financial Reporting Standards ("IFRS"), the responding U.S. producers reported their financial results on the basis of Generally Accepted Accounting Principles ("GAAP"). Firms reported their financial results on a calendar-year basis. As previously discussed in this report, most U.S. producers reported that their acetone is produced jointly with ***.

OPERATIONS ON ACETONE

Table VI-1 presents aggregated data on U.S. producers' operations with respect to acetone in 2016-2018. Table VI-2 presents changes in average unit value data between periods and table VI-3 presents selected company-specific financial data.

[1] A sixth firm, ***, provided a U.S. producers' questionnaire but did not report usable financial data. Based on reported shipment data, *** represented *** percent of total net sales in 2018.

[2] A seventh firm, ***, also provided a U.S. producers' questionnaire that did not contain financial data; it accounted for *** percent of the U.S. acetone industry's shipments in 2018.

Table VI-1
Acetone: Results of operations of U.S. producers, 2016-18

Item	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Total net sales	1,180,939	1,174,614	1,148,654
	Value (1,000 dollars)		
Total net sales	658,552	913,224	912,513
Cost of goods sold.-- Raw materials	463,847	646,842	738,789
Direct labor	31,008	30,324	31,874
Other factory costs	***	***	***
Less: Byproduct revenues[1]	***	***	***
Total COGS	591,143	785,752	863,131
Gross profit	67,409	127,472	49,382
SG&A expense	23,642	35,388	36,402
Operating income or (loss)	43,767	92,084	12,980
Interest expense	***	***	***
All other expenses	***	***	***
All other income	***	***	***
Net income or (loss)	43,325	90,855	12,543
Depreciation/amortization	14,715	26,979	14,624
Cash flow	58,040	117,834	27,167
	Ratio to net sales (percent)		
Cost of goods sold.-- Raw materials	70.4	70.8	81.0
Direct labor	4.7	3.3	3.5
Other factory costs	***	***	***
Less: Byproduct revenues[1]	***	***	***
Average COGS	89.8	86.0	94.6
Gross profit	10.2	14.0	5.4
SG&A expense	3.6	3.9	4.0
Operating income or (loss)	6.6	10.1	1.4
Net income or (loss)	6.6	9.9	1.4

Table continued on next page.

Table VI-1—Continued
Acetone: Results of operations of U.S. producers, 2016-18

Item	Calendar year		
	2016	2017	2018
	Ratio to total COGS before by-product offset (percent)		
Cost of goods sold.-- Raw materials	***	***	***
Direct labor	***	***	***
Other factory costs	***	***	***
Total COGS	100.0	100.0	100.0
	Unit value (dollars per short ton)		
Total net sales	558	777	794
Cost of goods sold.-- Raw materials	393	551	643
Direct labor	26	26	28
Other factory costs	***	***	***
Less: Byproduct revenues[1]	***	***	***
Average COGS	501	669	751
Gross profit	57	109	43
SG&A expense	20	30	32
Operating income or (loss)	37	78	11
Net income or (loss)	37	77	11
	Number of firms reporting		
Operating losses	1	1	2
Net losses	1	1	2
Data	5	5	5

[1] Byproduct revenues include sales of ***, but do not include sales of phenol.

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Acetone: Changes in AUVs between calendar years

Item	Between calendar years		
	2016-18	2016-17	2017-18
	Change in AUVs (dollars per short ton)		
Total net sales	237	220	17
Cost of goods sold.--			
Raw materials	250	158	92
Direct labor	1	(0)	2
Other factory costs	***	***	***
Less: Byproduct revenues[1]	***	***	***
Total COGS	251	168	82
Gross profit	(14)	51	(66)
SG&A expense	12	10	2
Operating income or (loss)	(26)	41	(67)
Net income or (loss)	(26)	41	(66)

[1] Byproduct revenues include sales of ***, but do not include sales of phenol.

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-3
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	Total net sales (short tons)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total net sales quantity	1,180,939	1,174,614	1,148,654
	Total net sales (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total net sales value	658,552	913,224	912,513
	Cost of goods sold (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total COGS	591,143	785,752	863,131
	Gross profit or (loss) (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total gross prof (loss)	67,409	127,472	49,382

Table continued on next page.

Table VI-3—Continued
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	SG&A expenses (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total SG&A expenses	23,642	35,388	36,402
	Operating income or (loss) (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total operating income or (loss)	43,767	92,084	12,980
	Net income or (loss) (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total net income or (loss)	43,325	90,855	12,543
	COGS to net sales ratio (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average COGS to net sales ratio	89.8	86.0	94.6

Table continued on next page.

Table VI-3—Continued
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	Gross profit or (loss) to net sales ratio (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average gross profit or (loss) to net sales ratio	10.2	14.0	5.4
	SG&A expense to net sales ratio (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average SG&A expense to net sales ratio	3.6	3.9	4.0
	Operating income or (loss) to net sales ratio (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average operating income or (loss) to net sales ratio	6.6	10.1	1.4
	Net income or (loss) to net sales ratio (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average net income or (loss) to net sales ratio	6.6	9.9	1.4

Table continued on next page.

Table VI-3—Continued
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	Unit net sales value (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit net sales value	558	777	794
	Unit raw materials (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit raw materials	393	551	643
	Unit direct labor (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit direct labor	26	26	28
	Unit other factory costs (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit other factory costs	***	***	***

Table continued on next page.

Table VI-3—Continued
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	Byproduct revenue offset (dollars per short ton)[1]		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average byproduct offset	***	***	***
	Unit COGS (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit COGS	501	669	751
	Unit gross profit or (loss) (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit gross profit or (loss)	57	109	43
	Unit SG&A expenses (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit SG&A expense	20	30	32

Table continued on next page.

Table VI-3—Continued
Acetone: Select results of operations of U.S. producers, by company, 2016-18

Item	Calendar year		
	2016	2017	2018
	Unit operating income or (loss) (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit operating income or (loss)	37	78	11
	Unit net income or (loss) (dollars per short ton)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average unit net income or (loss)	37	77	11

[1] Byproduct revenues include sales of ***, but do not include sales of phenol.

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales quantity and value

As shown in table VI-1, net sales of acetone consist of commercial sales and a small amount of internal consumption, which is included but not shown separately in this section of the report.[3] Commercial sales accounted for *** percent of net sales by both volume and value during the period examined. From 2016 to 2018, net sales volume decreased by 2.7 percent and net sales revenue irregularly increased by 38.6 percent. The average net sales unit values (per-short ton) increased throughout the period examined, from $558 in 2016 to $794 in 2018.[4] On a company-specific basis, all companies reported higher net sales AUVs in 2018 than in 2016.[5]

[3] Among producers reporting financial data, internal consumption was only reported by U.S. producer ***, and represented *** percent of net sales by both volume and value for the industry during the period examined. In response to questions by staff, ***. Email from ***.

[4] ***. Email from ***.

[5] *** were the only firms to report lower net sales AUVs from 2017 to 2018. The industry average increase was between *** percent from 2017 to 2018, with the exception of *** which had an increase of *** percent.

Cost of goods sold and gross profit or (loss)

Raw material costs represent the largest component of overall COGS. The total cost of raw materials as a share of COGS ranged from 78.1 percent (2016) to 85.0 percent (2018). On a unit basis (per-short ton), raw material costs increased from $393 in 2016 to $643 in 2018.[6] All U.S. producers reported higher per-short ton raw material costs in 2018 compared to both 2017 and 2016. With respect to their U.S. operations, several producers reported that they purchase inputs from related parties: ***.[7] As shown in table VI-4, raw materials were largely composed of benzene and propylene, with share values of 31.4 and 19.2 percent, respectively, of total 2018 raw material costs. Cumene, a key chemical in the production of acetone, was either purchased (47.3 percent) or produced (52.7 percent) by U.S. producers.

The second largest component of COGS during the period examined was other factory costs, which represented between *** percent (in 2016) and *** percent (in 2018) of overall COGS. On a per-short ton basis, other factory costs increased from *** in 2016 to *** in 2017, before decreasing to *** in 2018.[8]

Direct labor, the last component of COGS, accounted for between 5.2 percent (in 2016) and 3.7 percent (in 2018) of overall COGS. On a per-short ton basis, direct labor moved within a relatively narrow range and was unchanged at $26 in 2016 and 2017 before increasing to $28 in 2018. *** consistently had the highest per-short ton direct labor costs.[9]

On an overall basis, the acetone industry's gross profit increased from $67.4 million in 2016 to $127.5 million in 2017 before decreasing to $49.4 million in 2018. This was due to an increase in COGS from 2017 to 2018, coupled with a decline in net sales volume from 2016 to 2018. ***.

Since most U.S.-produced acetone yields another product (mainly ***), an allocation methodology is used by the U.S. producers to allocate COGS for acetone. Different allocation methodologies were used by all U.S. producers to allocate costs between acetone and other products. ***.[10]

Due to the different ways of allocating costs across jointly produced products, the rationale behind the cost allocation method used for acetone was given by the petitioners. Broadly, the petitioners believe that there are two principal methods of allocating common costs to acetone and phenol for joint acetone/phenol plants: ***. *** used the *** method, which allocates cost based upon the relative value of the component costs in producing

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[6] See footnote 3 in this section of the report.

[7] *** reported valuing purchases of inputs from related parties at ***. Email from ***. *** reported valuing purchases of inputs from related parties at ***. Email response from ***. *** reported valuing purchases of inputs from related parties at ***. Email from ***.

[8] ***. U.S. producers' questionnaire responses, section III-10. ***.

[9] ***. Email from ***.

[10] U.S. producers' questionnaire responses, section III-4. Additionally, *** U.S. producers reported byproducts as a result of their acetone production. ***, accounted for its byproducts (***) in net sales in the normal course of business, while *** accounted for its byproducts (***) as a reduction to COGS. The revenues from byproducts were reduced from COGS in table VI-1 and VI-3.

acetone and phenol – RGP and benzene – whereas *** allocated costs based on the relative weight of cumene that is contained in acetone and phenol. [11]

Table VI-4
Acetone: Raw materials used by U.S. producers, calendar year 2018

* * * * * * *

SG&A expenses and operating income

As shown in table VI-1, the industry's SG&A expense ratio (i.e., total SG&A expenses divided by total revenue) moved within a relatively narrow range, from 3.6 percent in 2016 to 4.0 percent in 2018. Table VI-3 shows that from 2016 to 2018 the pattern of company-specific SG&A expense ratios were different in terms of directional trend, with *** companies reporting a higher SG&A expense ratio in 2018 than in 2016, and *** reporting a lower SG&A expense ratio in 2018 than in 2016.

Operating income followed the same trend as gross profit and increased from $43.8 million in 2016 to $92.1 million in 2017, then decreased to $13.0 million in 2018. All firms except *** reported similar trends in operating income during the period examined. *** operating income consistently declined from 2016 to 2018.

Other expenses and net income

Classified below the operating income level are interest expense, other expenses, and other income, which are usually allocated to the product line from high levels in the corporation. Interest expense increased in 2016 from *** to *** in 2018. Other expenses increased from *** in 2016 to *** in 2018. Finally, all other income increased from *** in 2016 to *** in 2018.

Overall net income followed a similar trend to gross profit and operating income and increased from $43.3 million in 2016 to $90.9 million in 2017 before declining to $12.5 million in 2018.

Variance analysis

A variance analysis for the operations of U.S. producers of acetone is not presented in this report due to various allocation techniques with co-product costs used by U.S. producers, which may result in less comparability of costs among firms and a less meaningful analysis.

[11] Petitioners' postconference briefs, pp. 8-10.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-5 presents capital expenditures and research and development ("R&D") expenses by firm. *** responding firms provided capital expenditure data, and *** provided data on R&D expenses. *** accounted for the largest company-specific amount of capital expenditures during the period of investigation.[12] Total reported capital expenditures for the industry decreased from $26.6 million in 2016 to $19.9 million in 2018. *** to report R&D expenses, ***.[13]

Table VI-5
Acetone: Capital expenditures and research and development expenses for U.S. producers, by firm, 2016-18

Item	Calendar year		
	2016	2017	2018
	Capital expenditures (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total capital expenditures	26,549	20,980	19,885
	Research and development expenses (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total research and development expenses	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

ASSETS AND RETURN ON ASSETS

Table VI-6 presents data on the U.S. producers' total assets and their return on assets ("ROA").[14] Total net assets for the acetone industry increased from $128.5 million in 2016 to $145.1 million in 2018, and the ROA irregularly declined from 34.1 percent to 8.9 percent during this time.[15]

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[12] ***. *** U.S. producer's questionnaire responses, section III-13.

[13] *** U.S. producers' questionnaire response, section III-13.

[14] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product specific. Accordingly, high-level allocation factors were required in order to report a total asset value for acetone.

[15] *** relatively high ROA was the result of ***. Email from ***. *** high ROA in 2016 and 2017 was described as driven by ***. Email from ***.

Table VI-6
Acetone: Value of assets used in production, warehousing, and sales, and return on investment for U.S. producers, by firm, 2016-18

Firm	Calendar years		
	2016	2017	2018
	Total net assets (1,000 dollars)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total net assets	128,477	141,735	145,136
	Operating return on assets (percent)		
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Average operating return on assets	34.1	65.0	8.9

Source: Compiled from data submitted in response to Commission questionnaires

CAPITAL AND INVESTMENT

The Commission requested U.S. producers of acetone to describe any actual or potential negative effects of imports of acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-7 presents the number of firms reporting an impact in each category and table VI-8 provides the U.S. producers' narrative responses.

Table VI-7
Acetone: Actual and anticipated negative effects of imports on investment and growth and development

* * * * * * *

Table VI-8
Acetone: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2016

* * * * * * *

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (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 the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable 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 countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the alleged subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

THE INDUSTRY IN BELGIUM

The Commission issued a foreign producers' or exporters' questionnaire to one firm, INEOS Europe AG ("INEOS Europe") believed to be the only producer of acetone in Belgium.[3] A completed response to the Commission's questionnaire was received from this firm. INEOS exports to the United States accounted for approximately *** of U.S. imports of acetone from Belgium in 2018 and according to INEOS, the production of acetone in Belgium reported in its questionnaire accounted for *** production of acetone in Belgium. Table VII-1 presents information on the acetone operations of the responding producer in Belgium.

Table VII-1
Acetone: Summary data for producers in Belgium, 2018

* * * * * * *

Changes in operations

As presented in table VII-2, INEOS Europe reported *** operational and organizational changes since January 1, 2016.

Table VII-2
Acetone: INEOS's reported changes in operations; since January 1, 2016

* * * * * * *

Operations on acetone

Table VII-3 presents information on INEOS Europe's acetone operations in Belgium for 2016-18 as well as projections for 2019-20.

Capacity in Belgium increased by *** percent from 2016 to 2018, and is projected to be the same in 2020 as it was in 2017, but higher that in 2016, 2018, 2019. Belgian producer INEOS Europe's production increased by *** percent from 2016 to 2018, and is projected to *** for 2019 and 2020. Its exports to the United States *** from 2016 to 2018. Capacity utilization increased by *** percentage points from 2016 to 2018, from *** and is projected to be *** percent lower in 2019 and 2020 than in 2018.

[3] This firm was identified through a review of information submitted in the petition and contained in *** records.

Table VII-3
Acetone: Data for INEOS Europe, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-4, INEOS produced other products on the same equipment and machinery used to produce acetone. Table VII-4 indicates that acetone as a share of total production on this equipment and machinery accounted for slightly more than *** percent of production on average each year. Between 2016 and 2018, INEOS Europe's capacity utilization increased by *** percentage points.

Table VII-4
Acetone: INEOS Europe's overall capacity and production on the same equipment as subject production, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from Belgium are Germany, accounting for 38.3 percent of its acetone exports and the United Kingdom accounting for 17.9 percent (table VII-5). In 2018, the United States accounted for 9.4 percent of acetone from Belgium, which represented its fourth largest export market.

Table VII-5
Acetone: Exports from Belgium by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports to the United States from Belgium	8,862	30,099	56,608
Exports to other major destination markets from Belgium.--			
Germany	194,115	225,857	231,464
United Kingdom	66,789	86,206	107,966
Netherlands	134,787	133,068	102,996
France	13,430	12,769	28,140
China	55,472	8,593	24,125
Italy	6,896	3,291	10,352
Switzerland	4,731	9,837	8,301
Brazil	99	6,291	8,105
All other destination markets	38,274	17,208	26,585
Total exports from Belgium	523,454	533,219	604,639
	Value (1,000 dollars)		
Exports to the United States from Belgium	3,807	12,500	35,838
Exports to other major destination markets from Belgium.--			
Germany	126,869	116,720	157,014
United Kingdom	44,280	41,475	69,175
Netherlands	113,189	103,376	70,543
France	9,430	7,659	22,137
China	25,264	3,757	14,727
Italy	4,513	2,100	9,903
Switzerland	3,157	4,734	5,413
Brazil	82	3,222	5,617
All other destination markets	23,732	10,676	22,822
Total exports from Belgium	354,323	306,220	413,188

Table continued on the next page.

Table VII-5--Continued
Acetone: Exports from Belgium by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
Exports to the United States from Belgium	430	415	633
Belgium exports to other major destination markets from.--			
Germany	654	517	678
United Kingdom	663	481	641
Netherlands	840	777	685
France	702	600	787
China	455	437	610
Italy	654	638	957
Switzerland	667	481	652
Brazil	829	512	693
All other destination markets	620	620	858
Total Belgium exports	677	574	683
	Share of quantity (percent)		
Exports to the United States from Belgium	1.7	5.6	9.4
Exports to other major destination markets from Belgium--			
Germany	37.1	42.4	38.3
United Kingdom	12.8	16.2	17.9
Netherlands	25.7	25.0	17.0
France	2.6	2.4	4.7
China	10.6	1.6	4.0
Italy	1.3	0.6	1.7
Switzerland	0.9	1.8	1.4
Brazil	0.0	1.2	1.3
All other destination markets	7.3	3.2	4.4
Total Belgium exports	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 2914.11 as reported by EuroStat in the Global Trade Atlas database, accessed March 15, 2019.

THE INDUSTRY IN KOREA

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export acetone from Korea.[4] Usable responses to the Commission's questionnaire were received from Kumho P&B Chemicals, Inc. ("Kumho") and LG Chem, Ltd. ("LG Chem"). These firms' exports to the United States accounted for approximately *** percent of U.S. imports of acetone from Korea in 2018. According to estimates requested of the responding Korean producers, the production of acetone in Korea reported in questionnaires accounts for virtually all of overall production of acetone in Korea. Table VII-6 presents information on the acetone operations of the responding producers in Korea.

Table VII-6
Acetone: Summary data for producers in Korea, 2018

* * * * * * *

Changes in operations

As presented in table VII-7, producers in Korea reported several operational and organizational changes since January 1, 2016.

Table VII-7
Acetone: Reported changes in operations by producers in Korea, since January 1, 2016

* * * * * * *

Operations on acetone

Table VII-8 presents information on the acetone operations of the responding producers and exporters in Korea.

Capacity in Korea increased by *** percent from 2016 to 2018, and projected capacity is expected to decline in 2019 but increase in 2020 to an amount *** than capacity in 2018. Korean producers Kumho and LG Chem's production increased by *** percent from 2016 to 2018, but is projected to decrease in 2019 and increase in 2020 such that in 2020 is projected to be *** than 2018 levels. Exports to the United States increased by *** percent from 2016 to 2018, but are projected to decrease by *** percent in 2019 and *** percent in 2020. Capacity utilization increased by *** percentage points from 2016 to 2018 from *** percent to *** percent. However, it is projected to remain at nearly that level respectively in 2019 and 2020.

[4] These firms were identified through a review of information submitted in the petition and contained in *** records.

Table VII-8
Acetone: Data for producers in Korea, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-9, responding Korean firms produced other products on the same equipment and machinery used to produce acetone. Table VII-9 indicates that acetone as a share of total production on equipment and machinery ranged from *** percent to *** percent per year from 2016 to 2018.

Table VII-9
Acetone: Overall capacity and production on the same equipment as in-scope product by producers in Korea, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from Korea are China accounting for 44.1 percent, the United States accounting for 28.9 percent, and Japan accounting for 10.9 percent in 2018 (table IV-10).

Table VII-10
Acetone: Exports from Korea by destination markets, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports to the United States from Korea	21,834	68,978	104,787
Exports to other major destination markets from Korea.--			
China	180,174	147,785	159,594
Japan	18,247	30,867	39,608
India	30,506	33,818	32,322
United Kingdom	---	---	6,355
Vietnam	454	86	4,000
Malaysia	1,990	2,176	2,688
Brazil	1,107	2,342	2,344
Philippines	44	96	2,249
All other destination markets	5,957	30,663	8,032
Total exports from Korea	260,313	316,811	361,978
	Value (1,000 dollars)		
Exports to the United States from Korea	10,348	42,876	56,502
Exports to other major destination markets from Korea.--			
China	87,426	93,819	83,936
Japan	8,927	20,095	24,051
India	14,448	22,238	19,163
United Kingdom	---	---	2,652
Vietnam	268	54	2,157
Malaysia	977	1,512	1,739
Brazil	633	1,449	1,356
Philippines	35	76	1,311
All other destination markets	4,426	22,145	5,874
Total Korea exports	127,488	204,265	198,741

Table continued on next page.

Table VII-10--Continued
Acetone: Exports from Korea by destination markets, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
Exports to the United States from Korea	474	622	539
Korea exports to other major destination markets.--			
China	485	635	526
Japan	489	651	607
India	474	658	593
United Kingdom	---	---	417
Vietnam	591	631	539
Malaysia	491	695	647
Brazil	572	619	579
Philippines	797	796	583
All other destination markets	743	722	731
Total Korea exports	490	645	549
	Share of quantity (percent)		
Exports to the United States from Korea	8.4	21.8	28.9
Exports to other major destination markets from Korea.--			
China	69.2	46.6	44.1
Japan	7.0	9.7	10.9
India	11.7	10.7	8.9
United Kingdom	---	---	1.8
Vietnam	0.2	0.0	1.1
Malaysia	0.8	0.7	0.7
Brazil	0.4	0.7	0.6
Philippines	0.0	0.0	0.6
All other destination markets	2.3	9.7	2.2
Total Korea exports	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 2914.11 as reported by Korea Customs and Trade Development Institution in the Global Trade Atlas database, accessed March 15, 2019.

THE INDUSTRY IN SAUDI ARABIA

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce acetone in Saudi Arabia.[5] Usable responses to the Commission's questionnaire were received from Rabigh Refining & Petrochemical Co. ("Rabigh") and Saudi Kayan Petrochemical Company ("Saudi Kayan"). These firms' exports to the United States accounted for *** percent of U.S. imports of acetone from Saudi Arabia in 2018. According to estimates requested of the responding Saudi Arabian producers, the production of acetone in Saudi Arabia reported in questionnaires accounts for approximately *** percent of overall production of acetone in Saudi Arabia. Table VII-11 presents information on the acetone operations of the responding producers and exporters in Saudi Arabia.

Table VII-11
Acetone: Summary data for producers in Saudi Arabia, 2018

* * * * * * *

Changes in operations

As presented in table VII-12, producers in Saudi Arabia reported *** since January 1, 2016.

Table VII-12
Acetone: Reported changes in operations, since January 1, 2016

* * * * * * *

Operations on acetone

Table VII-13 presents information on the acetone operations of the responding producers in Saudi Arabia.

Capacity in Saudi Arabia increased by *** percent from 2016 to 2018, and projected capacity for 2019 and 2020 is expected to ***. Saudi Arabian producers' production *** from 2016 to 2018, but is projected to decrease from 2019 and 2020 by *** percent. In 2016, no Saudi Arabian producer exported to the U.S. However, exports to the U.S. started in 2017 and increased by *** percent from 2017 to 2018, but it is projected to decrease in 2019 and 2020. As capacity increased in 2017, capacity utilization in 2017 decreased from 2016 levels ***. Capacity utilization increased by *** percentage points from 2016 to 2018 to *** percent. Capacity utilization is projected to reach *** percent in 2019, but it is projected to decrease by *** percentage points from 2019 and 2020.

[5] These firms were identified through a review of information submitted in the petition and contained in *** records.

Table VII-13
Acetone: Data for producers in Saudi Arabia, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-14, responding Saudi Arabian firms produced other products on the same equipment and machinery used to produce acetone.

Table VII-14
Acetone: Overall capacity and production on the same equipment as in-scope products by producers in Saudi Arabia, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from Saudi Arabia are China which accounted for 36.6 percent of its 2018 acetone exports, United Kingdom which accounted for 26.0, and Turkey which accounted for 22.3 percent (table VII-15).

Table VII-15
Acetone: Exports from Saudi Arabia by destination market, 2014-16

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports to the United States from Saudi Arabia	---	---	1,296
Exports to other major destination markets from Saudi Arabia.--			
China	33,297	30,347	17,459
United Kingdom	---	8,837	12,401
Turkey	13,467	12,919	10,618
United Arab Emirates	7,829	6,074	4,292
Italy	---	---	1,068
Netherlands	6,614	---	544
Belgium	5,273	13,314	---
India	6,023	---	---
Singapore	2,275	---	0
Total Saudi Arabia exports	74,779	71,490	47,678
	Value (1,000 dollars)		
Exports to the United States from Saudi Arabia	---	---	745
Exports to other major destination markets from Saudi Arabia.--			
China	30,478	16,339	10,038
United Kingdom	---	4,313	7,130
Turkey	12,009	7,138	6,104
United Arab Emirates	7,105	3,652	2,468
Italy	---	---	614
Netherlands	6,087	---	313
Belgium	4,767	6,691	---
India	5,543	---	---
Singapore	2,094	---	0
Total Saudi Arabia exports	68,084	38,134	27,411

Table continued on the next page.

Table VII-15-Continued
Acetone: Exports from Saudi Arabia by destination market, 2014-16

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
Exports to the United States from Saudi Arabia	---	---	575
Exports to other major destination markets from Saudi Arabia.--			
China	915	538	575
United Kingdom	---	488	575
Turkey	892	553	575
United Arab Emirates	908	601	575
Italy	---	---	575
Netherlands	920	---	575
Belgium	904	503	---
India	920	---	---
Singapore	920	---	363
Total exports from Saudi Arabia	910	533	575
	Share of quantity (percent)		
Exports to the United States from Saudi Arabia	---	---	2.7
Exports to other major destination markets from Saudi Arabia.--			
China	44.5	42.4	36.6
United Kingdom	---	12.4	26.0
Turkey	18.0	18.1	22.3
United Arab Emirates	10.5	8.5	9.0
Italy	---	---	2.2
Netherlands	8.8	---	1.1
Belgium	7.1	18.6	---
India	8.1	---	---
Singapore	3.0	---	0.0
Total exports from Saudi Arabia	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Exports statistics under HS subheading 2914.11 as reported by UN Comtrade in the Global Trade Atlas database, accessed March 15, 2019.

THE INDUSTRY IN SINGAPORE

The Commission issued foreign producers' or exporters' questionnaire to one firms, Mitsui Phenols Singapore Pte Ltd ("Mitsui") believed to be the only producer of acetone in Singapore.[6] Usable response to the Commission's questionnaire were received from Mitsui. This firm exports to the United States accounted for approximately *** percent of U.S. imports of acetone from Singapore in 2018. According to estimates requested of the responding Singapore producer, the production of acetone in Singapore reported in questionnaires accounts for *** production of acetone in Singapore. Table VII-16 presents information on the acetone operations of the responding producer in Singapore.

Table VII-16
Acetone: Summary data for producers in Singapore, 2018

* * * * * * *

Changes in operations

As presented in table VII-2 Mitsui reported *** since January 1, 2016.

Table VII-17
Acetone: Reported changes in operations by Mitsui, since January 1, 2016

* * * * * * *

Operations on acetone

Table VII-18 presents information on the acetone operations of the responding producers and exporters in Singapore.

Capacity in Singapore remained constant throughout the period of investigations and is projected to stay the same in 2019 and 2020. *** production increased by *** percent from 2016 to 2018, and is projected to increase in 2019 by *** and is expected to decrease in 2020 by *** percent. Exports to the United States increased by *** percent but are projected to decrease by *** percent in 2019 and *** in 2020. Capacity utilization increased by *** percentage points from 2016 to 2018; however, it is projected to produce at *** in 2019 and 2020.

[6] These firms were identified through a review of information submitted in the petition and contained in *** records.

Table VII-18
Acetone: Data for Mitsui, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-19, responding Singapore firms produced other products on the same equipment and machinery used to produce acetone. Overall capacity utilization was reported to be ***.

Table VII-19
Acetone: Mitsui's overall capacity and production on the same equipment as in-scope production, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from Singapore in 2018 were Thailand which accounted for 25.1 percent of Singapore's acetone export, Indonesia, which accounted for 14.0 percent, and Germany, which accounted for 11.1 percent (table VII-20).

Table VII-20
Acetone: Exports from Singapore by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports from Singapore to the United States	2,755	11,238	11,573
Exports from Singapore to other major destination markets.--			
Thailand	50,390	56,942	43,501
Indonesia	18,877	21,805	24,240
Germany	17,813	2,304	19,288
China	33,422	29,624	18,596
Malaysia	13,576	13,882	14,773
Korea South	4,409	7,716	11,042
India	12,184	7,853	8,032
Japan	2,003	251	6,570
All other destination markets	16,268	31,843	15,451
Total exports from Singapore	171,697	183,459	173,066
	Value (1,000 dollars)		
Exports from Singapore to the United States	1,264	6,555	6,222
Exports from Singapore to other major destination markets.--			
Thailand	24,013	38,134	28,703
Indonesia	9,081	16,307	15,459
Germany	6,964	1,117	12,320
China	16,627	18,304	8,966
Malaysia	7,210	10,510	10,362
Korea South	2,111	5,044	5,745
India	5,513	4,925	3,518
Japan	987	96	3,820
All other destination markets	8,229	20,992	10,666
Total exports from Singapore	82,000	121,984	105,780

Table continued on next page.

Table VII-20—Continued
Acetone: Exports from Singapore by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per short ton)		
Exports from Singapore to the United States	459	583	538
Exports from Singapore to other major destination markets.--			
Thailand	477	670	660
Indonesia	481	748	638
Germany	391	485	639
China	498	618	482
Malaysia	531	757	701
Korea South	479	654	520
India	452	627	438
Japan	493	380	581
All other destination markets	506	659	690
Total exports from Singapore	478	665	611
	Share of quantity (percent)		
Exports from Singapore to the United States	1.6	6.1	6.7
Exports from Singapore to other major destination markets.--			
Thailand	29.3	31.0	25.1
Indonesia	11.0	11.9	14.0
Germany	10.4	1.3	11.1
China	19.5	16.1	10.7
Malaysia	7.9	7.6	8.5
Korea South	2.6	4.2	6.4
India	7.1	4.3	4.6
Japan	1.2	0.1	3.8
All other destination markets	9.5	17.4	8.9
Total Singapore exports	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 2914.11 as reported by International Enterprise Singapore in the Global Trade Atlas database, accessed March 15, 2019.

THE INDUSTRY IN SOUTH AFRICA

The Commission issued a foreign producer or exporter questionnaire to one firm, Sasol South Africa Limited ("Sasol") believed to be the only producer of acetone in South Africa.[7] A completed response to the Commission's questionnaire was received by this firm. This firm's export to the United States accounted for approximately *** percent of U.S. imports of acetone from South Africa in 2018. According to estimates requested of the responding South Africa producer, the production of acetone in South Africa reported in questionnaire accounts for *** production of acetone in South Africa. Table VII-21 presents information on the acetone operations of the responding producer in Belgium.

Table VII-21
Acetone: Summary data for Sasol, 2018

* * * * * * *

Changes in operations

Sasol reported *** operational and organizational changes since January 1, 2016.

Operations on acetone

Table VII-22 presents information on the acetone operations of the responding producer in South Africa.

Capacity in South Africa decreased by *** percent from 2016 to 2018 but is projected to increase by *** percent in 2019 and *** in 2020. *** production decreased by *** percent from 2016 to 2018, but it is projected to increase in 2019 by *** and is expected to *** for 2020. Exports to the United States decreased by *** percent from 2016 to 2018 but are projected to *** in 2019 and 2020. Capacity utilization decreased by *** percentage points from 2016 to 2018 from ***. It is projected to *** in 2019 and 2020.

Table VII-22
Acetone: Data for Sasol, 2016-18 and projection calendar years 2019 and 2020

* * * * * * *

[7] These firms were identified through a review of information submitted in the petition and contained in *** records.

Alternative products

As shown in table VII-23, the sole responding South Africa firm produced no other products on the same equipment and machinery used to produce acetone, since Sasol uses a process in which no by products or coproducts are produced.

Table VII-23
Acetone: Overall capacity and production on the same equipment as in-scope production by Sasol, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from South Africa include Belgium, which accounted for 41.7 percent of acetone exports from South Africa in 2018, United States, which accounted for 34.4 percent, and Singapore, which accounted 10.5 percent (table VII-24).

Table VII-24
Acetone: Exports from South Africa by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports to the United States from South Africa	27,572	29,751	26,815
Exports to other major destination markets from South Africa.--			
Belgium	29,243	25,459	32,508
Singapore	7,647	8,409	8,160
United Arab Emirates	3,933	3,335	4,639
Brazil	8,216	5,362	1,448
India	268	41	844
Jordan	331	1,433	730
Israel	2,497	2,219	661
Ghana	185	400	351
All other destination markets	8,214	6,496	1,757
Total exports from South Africa	88,105	82,905	77,915

Table continued on next page.

Table VII-24--Continued
Acetone: Exports from South Africa by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
Exports to the United States from South Africa	11,098	17,814	16,908
Exports to other major destination markets from South Africa.--			
Belgium	11,633	20,700	16,438
Singapore	2,686	4,876	4,127
United Arab Emirates	1,630	2,091	2,312
Brazil	3,119	3,856	1,135
India	124	32	453
Jordan	153	824	447
Israel	1,049	1,354	398
Ghana	108	318	291
All other destination markets	3,421	3,751	1,414
Total exports from South Africa	35,022	55,617	43,921
	Unit value (dollars per short ton)		
Exports to the United States from South Africa	403	599	631
Exports to other major destination markets from South Africa.--			
Belgium	398	813	506
Singapore	351	580	506
United Arab Emirates	414	627	498
Brazil	380	719	784
India	462	770	537
Jordan	464	575	612
Israel	420	610	601
Ghana	585	796	827
All other destination markets	417	578	804
Total exports from South Africa	398	671	564
	Share of quantity (percent)		
Exports to the United States from South Africa	31.3	35.9	34.4
Exports to other major destination markets from South Africa.--			
Belgium	33.2	30.7	41.7
Singapore	8.7	10.1	10.5
United Arab Emirates	4.5	4.0	6.0
Brazil	9.3	6.5	1.9
India	0.3	0.0	1.1
Jordan	0.4	1.7	0.9
Israel	2.8	2.7	0.8
Ghana	0.2	0.5	0.5
All other destination markets	9.3	7.8	2.3
Total exports from South Africa	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 2914.11 as reported by International Enterprise South Africa in the Global Trade Atlas database, accessed March 15, 2019.

THE INDUSTRY IN SPAIN

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export acetone from Spain.[8] Usable responses to the Commission's questionnaire was received from one foreign producer, Cepsa Quimica S.A. ("Cepsa"). These firms' exports to the United States accounted for approximately *** percent of U.S. imports of acetone from Spain in 2018. According to estimates requested of the responding Spanish producer, the production of acetone in Spain reported in questionnaires accounts for virtually all of the production of acetone in Spain. Table VII-25 presents information on the acetone operations of Cepsa.

Table VII-25
Acetone: Summary data for producers in Spain, 2018

* * * * * * *

Changes in operations

Cepsa reported *** operational and organizational changes since January 1, 2016.

Operations on acetone

Table VII-26 presents information on the acetone operations of the responding producers and exporters in Spain.

Capacity in Spain remained constant from 2016 to 2018 and are projected to remain the 2019 and 2020. Cepsa's production increased by *** percent from 2016 to 2018, and it is projected to increase in 2019 by *** percent and stay at that level for 2020. Its exports to the United States increased by *** percent from 2016 to 2018, but are projected to decrease *** in 2019 and 2020. Capacity utilization decreased by *** percentage points from 2016 to 2018 and is projected to increase further by *** percentage points in 2019 and maintain the same rate in 2020.

Table VII-26
Acetone: Data for Cepsa, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

[8] These firms were identified through a review of information submitted in the petition and contained in *** records.

Alternative products

As shown in table VII-27, Cepsa produced other products on the same equipment and machinery used to produce acetone.

Table VII-27
Acetone: Overall capacity and production on the same equipment as in-scope products by Cepsa in Spain, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for acetone from Spain include Netherlands, which accounted for 62.1 percent of acetone exports from Spain, France, which accounted for 15.0 percent, and German, which accounted for 8.7 percent (table IV-28).

Table VII-28
Acetone: Exports from Spain, by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (short tons)		
Exports to the United States from Spain	6,834	11,308	27,431
Exports to other major destination markets from Spain.--			
Belgium	187,758	259,361	281,249
Germany	91,015	103,498	97,451
United Kingdom	10,023	2,414	29,175
Portugal	5,453	4,692	5,312
Switzerland	8,327	7,341	5,083
Netherlands	1,984	2,807	4,612
China	0	1	3,310
Morocco	2,111	2,640	2,640
All other destination markets	3,128	7,114	5,065
Total exports from Spain	316,633	401,176	461,326

Table continued on next page.

Table VII-28--Continued
Acetone: Exports from Spain, by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
Exports to the United States from Spain	3,319	7,762	18,576
Exports to other major destination markets from Spain.--			
Belgium	93,119	162,252	213,847
Germany	42,945	65,842	73,886
United Kingdom	4,983	1,235	21,401
Portugal	3,576	4,930	4,317
Switzerland	4,192	4,822	4,240
Netherlands	644	1,256	2,026
China	0	4	1,980
Morocco	1,322	2,398	1,861
All other destination markets	2,054	6,886	3,804
Total exports from Spain	156,153	257,386	345,937
	Unit value (dollars per short ton)		
Exports to the United States from Spain	486	686	677
Exports to other major destination markets from Spain.--			
Belgium	496	626	760
Germany	472	636	758
United Kingdom	497	512	734
Portugal	656	1,051	813
Switzerland	503	657	834
Netherlands	325	447	439
China	3,629	6,550	598
Morocco	626	908	705
All other destination markets	656	968	751
Total exports from Spain	493	642	750
	Share of quantity (percent)		
Exports to the United States from Spain	2.2	2.8	5.9
Exports to other major destination markets from Spain.--			
Belgium	59.3	64.7	61.0
Germany	28.7	25.8	21.1
United Kingdom	3.2	0.6	6.3
Portugal	1.7	1.2	1.2
Switzerland	2.6	1.8	1.1
Netherlands	0.6	0.7	1.0
China	0.0	0.0	0.7
Morocco	0.7	0.7	0.6
All other destination markets	1.0	1.8	1.1
Total exports from Spain	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official imports statistics of imports from Spain under HS subheading 2914.11 as reported by various national statistical authorities in the Global Trade Atlas database, accessed March 15, 2019.

SUBJECT COUNTRIES COMBINED

Table VII-29 presents information on acetone operations of the responding foreign producers and exporters in all subject countries combined. The combined capacity in the subject countries increased by *** percent from 2016 to 2018, and it is projected to decrease in 2018 but increase in 2019. Combined production decreased by *** percent from 2016 to 2018 and is projected to decrease by *** in 2019 and increase by *** in 2020. Combined capacity utilization decreased by *** percentage points from 2016 to 2018, and is expected to increase in 2019 and decrease 2020. Combined exports to the United States more than doubled from 2016 to 2018 and are projected to decrease by *** from 2018 to 2019 and further by *** percent from 2019 to 2020. Table VII-30 present data for all subject countries with the exception of Saudi Arabia.

Table VII-29
Acetone: Data on industry in all subject countries, 2016-18, and projected calendar years 2019 and 2020

* * * * * * *

Table VII-30
Acetone: Data on industry in all subject countries less Saudi Arabia, 2016-18 and projection calendar years 2019 and 2020

* * * * * * *

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-31 presents data on U.S. importers' reported inventories of acetone. Inventories from subject sources accounted for *** inventories held by importers in the United States. These inventories increased by *** percent from 2016 to 2018. As a ratio to U.S. imports, inventories increased by *** percentage points.

Table VII-31
Acetone: U.S. importers' end-of-inventories of imports by source, 2016-18

* * * * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of acetone from all subject countries between January 1, 2019 through December 31, 2019 (Table VII-32).

Table VII-32
Acetone: Arranged imports, January 2019 through December 2018

* * * * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

On March 25, 2019, India announced the continuation of antidumping duties on acetone from the European Union, Singapore, South Africa, and the United States for a period of five years.[9] These duties range from $56.91 to $277.85 per metric ton. On February 18, 2015, India imposed antidumping duties of $79.75 per metric ton on imports of acetone from Korea.[10] In addition, on April 16, 2015, India announced the imposition of antidumping duties, ranging from $86.10 to $271.37 per metric ton, on imports of acetone from Taiwan and Saudi Arabia.[11]

China currently imposes antidumping duties on imports of acetone from Japan, Singapore, Korea, and Taiwan. These five-year duties were imposed in 2008 and ranged from 5.0 to 56.1 percent.[12] China re-instituted the duties for an additional five years on June 6, 2014.[13]

INFORMATION ON NONSUBJECT COUNTRIES

Nonsubject imports declined irregularly during 2016-18, from 12,236 tons (12 percent of total U.S. acetone imports) in 2016 to 8,129 tons (3 percent) in 2018. Taiwan was the leading supplier of U.S. nonsubject imports of acetone in 2016 and 2017, accounting for 10,136 tons

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[9] Government of India, Ministry of Finance, Department of Revenue, Notification No. 14/2019-Customs (ADD), http://www.cbic.gov.in/htdocs-cbec/customs/cs-act/notifications/notfns-2019/cs-add2019/csadd14-2019.pdf (retrieved March 26, 2019).

[10] Government of India, Ministry of Finance, Department of Revenue, Notification No. 05/2015-Customs (ADD), http://www.cbic.gov.in/htdocs-cbec/customs/cs-act/notifications/notfns-2015/cs-add2015/csadd05-2015 (retrieved March 26, 2019).

[11] Government of India, Ministry of Finance, Department of Revenue, Notification No. 13/2015-Customs (ADD), http://www.cbic.gov.in/htdocs-cbec/customs/cs-act/notifications/notfns-2015/cs-add2015/csadd13-2015.pdf (retrieved March 26, 2019).

[12] Embassy of the People's Republic of China in the United States of America, "China imposes anti-dumping duties on imported acetone," June 10, 2008, http://www.china-embassy.org/eng//xnyfgk/t463911.htm (retrieved March 26, 2019).

[13] China Daily, "China extends anti-dumping duties on acetone imports," June 6, 2014, http://www.chinadaily.com.cn/china/2014-06/06/content_17569081.htm (accessed March 26, 2019).

(83 percent of total U.S. nonsubject imports) in 2016 and 22,080 tons (98 percent) in 2017.[14] In 2018, however, U.S. imports from Finland and Italy increased and totaled 3,535 tons (43 percent of nonsubject imports) and 2,885 tons (35 percent), respectively, while U.S. imports of acetone from Taiwan declined to 838 tons.[15]

Although U.S. imports of acetone from China were relatively small in comparison—about 161 tons in 2018 (appproximately 2 percent of non-subject imports), sources testifying at the Commission's conference stated that China is importing less acetone from Korea because China is building up its acetone production capacity, resulting in Korea shifting exports from China to the United States.[16] One source reported that three Chinese companies are starting/adding new capacity: Zhejiang Petrochemical is expected to start up 250,000 metric tons per year of new capacity in mid-2019; Chang Chun is expected to expand its existing capacity by an additional 60,000 metric tons per year by the end of 2019; and Formosa Chemicals Industries is expected to start construction on a project of undisclosed size in 2019-20.[17] ***.[18]

***.[19]

[14] USITC DataWeb/USDOC (HTS subheadings 2914.11.1000 and 2914.11.5000; accessed March 19, 2019).

[15] Finland exported 2 tons of acetone to the United States in 2017 but none in 2016. Despite the growth in exports to the United States, Finland's global exports of acetone declined in 2018 to 53,982 tons from about 159,000 tons annually in 2016-17 (or by almost 70 percent). IHS Global Trade Atlas (HTS subheading 2914.11; accessed March 19, 2019).

[16] Conference transcript, p. 91 (Szamosszegi). Also, Korean exports of acetone to India have been subject to an antidumping duty since 2015K. R. Srivats, "Anti-dumping Duty Imposed on Acetone Imports from South Korea," *The Hindu Business Line*, February 19, 2015, https://www.thehindubusinessline.com/economy/antidumping-duty-imposed-on-acetone-imports-from-south-korea/article6911818.ece. Given the flux in the Chinese and Indian acetone markets, U.S. exports of acetone to China and India grew substantially during 2017-18; U.S. acetone exports to India increased from about 10 tons in 2017 to about 2449 tons in 2018 while U.S. exports to China dipped to about 128 tons in 2017 (from about 5,853 tons in 2016) before rebounding to about 3,638 tons in 2018.

[17] Yoyo Liu, "Solvents: Acetone: China Acetone Supply Glut To Ease In 2019 On Demand Growth," *China Chemicals Outlook 2019*, ICIS, https://www.icis.com/explore/resources/china-chemicals-outlook-2019-publication/ (retrieved March 18, 2019).

[18] ***.

[19] ***.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
84 FR 6819 February 28, 2019	*Acetone From Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain; Institution of Antidumping Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.federalregister.gov/documents/2019/02/28/2019-03477/acetone-from-belgium-korea-saudi-arabia-singapore-south-africa-and-spain-institution-of-antidumping
84 FR 9755 March 18, 2019	*Acetone From Belgium, the Republic of Korea, the Kingdom of Saudi Arabia, Singapore, the Republic of South Africa, and Spain: Initiation of Less- Than-Fair-Value Investigations*	https://www.federalregister.gov/documents/2019/03/18/2019-05004/acetone-from-belgium-the-republic-of-korea-the-kingdom-of-saudi-arabia-singapore-the-republic-of

APPENDIX B

LIST OF STAFF CONFERENCE {(RESERVED)}

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission's preliminary conference:

Subject: Acetone from Belgium, Korea, Saudi Arabia, Singapore, South Africa, and Spain

Inv. Nos.: 731-TA-1435-1440 (Preliminary)

Date and Time: March 12, 2019 - 9:30 a.m.

Sessions were held in connection with these preliminary phase investigations in Courtroom B (Room 111), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Imposition (**Stephen J. Orava**, King & Spalding LLP)
In Opposition to Imposition (**Jeffrey S. Grimson**, Mowry & Grimson, PLLC)

In Support of the Imposition of Antidumping Duty Orders:

King & Spalding LLP
Schagrin Associates
Washington, DC
on behalf of

Coalition for Acetone Fair Trade

Paul Sanders, Global Business Director, Chemical Intermediates, AdvanSix, Inc.

Clay Stephenson, Senior Product Manager, AdvanSix, Inc.

Frank Hayes, Chief Financial Officer, ALTIVIA Petrochemicals, LLC

Tim Duhè, Commercial Vice President, ALTIVIA Petrochemicals, LLC

Davor Safar, Global Product Director, Olin Corporation

In Support of the Imposition of
Antidumping Duty Orders (continued):

Andrew Szamosszegi, Principle, Capital Trade, Inc.

Charles Anderson, Principle, Capital Trade, Inc.

Bonnie B. Byers, Senior International Trade Consultant,
King & Spalding LLP

Stephen J. Orava)
Neal J. Reynolds)
) – OF COUNSEL
Benjamin J. Bay)
Christopher T. Cloutier)

In Opposition to the Imposition of
Antidumping Duty Orders:

Mowry & Grimson, PLLC
Washington, DC
on behalf of

Sasol Chemicals (USA) LLC

Randy Thornlow, Regional Sales Manager, Sasol USA

Jeffrey S. Grimson) – OF COUNSEL

Baker & Hostetler LLP
Washington, DC
on behalf of

CEPSA Química S.A.
Monument Chemical, LLC
The Plaza Group Inc.

Randy Velarde, President, The Plaza Group Inc.

Qamar Bhatia, President, Monument Chemical

Sarves Peri, Vice President, Supply Chain,
Monument Chemical

In Opposition to the Imposition of
Antidumping Duty Orders (continued):

Jeff Haug, Director of Purchasing, Monument Chemical

Carlos Díaz Castro, Vice President, Sales & Marketing, Phenol Chain Business Unit, CEPSA QUÍMICA S.A.

Mark B. Lehnardt)
) – OF COUNSEL
Jake R. Frischknecht)

Drinker Biddle & Reath LLP
Washington, DC
on behalf of

Lucite International, Inc.

Chris Frederic, Manager of Direct Procurement, Procurement Services Department, Lucite International, Inc.

Robert Connolly, Director of Procurement, Americas, Lucite International, Inc.

Douglas J. Heffner)
) – OF COUNSEL
Richard P. Ferrin)

Akin Gump Strauss Hauer & Feld LLP
Washington, DC
on behalf of

Mitsui Phenols Singapore Pte. Ltd. ("MPS")

James P. Dougan, Vice President, Economic Consulting Services, LLC

Cara Groden, Senior Economist, Economic Consulting Services, LLC

Bernd Janzen) – OF COUNSEL

In Opposition to the Imposition of
Antidumping Duty Orders (continued):

Steptoe & Johnson LLP
Washington, DC
on behalf of

INEOS Europe AG
INEOS Americas LLC

Michael Foster, Business Manager Americas,
INEOS Americas LLC

Eric C. Emerson)
) – OF COUNSEL
St. Lutheran Tillman)

INTERESTED PARTIES IN OPPOSITION:

White & Case LLP
Washington, DC
on behalf of

Rabigh Refining and Petrochemical Company ("PetroRabigh")
The Saudi Basic Industries Corporation ("SABIC")
Saudi Kayan Petrochemical Company ("Saudi Kayan")
The Saudi Arabia Petrochemical Manufacturers' Committee ("PMC")

Scott S. Lincicome)
) – OF COUNSEL
Ron Kendler)

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Neal J. Reynolds,** King & Spalding LLP
and **Christopher T. Cloutier**, Schagrin Associates)
In Opposition to Imposition (**Mark B. Lehnardt**, Baker & Hostetler LLP
and **Richard P. Ferrin**, Drinker Biddle & Reath LLP)

-END-

APPENDIX C

SUMMARY DATA

All U.S. producers

Table C-1
Acetone: Summary data concerning the U.S. market, 2016-18
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. consumption quantity:						
Amount	1,190,477	1,237,596	1,341,282	12.7	4.0	8.4
Producers' share (fn1)	90.8	85.8	80.9	(9.8)	(5.0)	(4.9)
Importers' share (fn1):						
Belgium	2.8	4.0	5.2	2.3	1.2	1.1
Korea	2.2	4.5	7.4	5.2	2.3	2.9
Saudi Arabia	---	0.4	0.5	0.5	0.4	0.1
Singapore	0.2	0.4	1.0	0.8	0.1	0.7
South Africa	2.4	2.2	2.3	(0.1)	(0.2)	0.2
Spain	0.6	0.9	2.0	1.5	0.3	1.1
Subject sources	8.2	12.4	18.5	10.2	4.2	6.1
Subject sources less Saudi Arabia	8.2	11.9	18.0	9.7	3.7	6.0
Nonsubject sources	1.0	1.8	0.6	(0.4)	0.8	(1.2)
Nonsubject sources plus Saudi Arabia	1.0	2.3	1.1	0.1	1.2	(1.2)
All import sources	9.2	14.2	19.1	9.8	5.0	4.9
U.S. consumption value:						
Amount	673,003	969,875	1,060,056	57.5	44.1	9.3
Producers' share (fn1)	91.1	86.8	82.2	(9.0)	(4.4)	(4.6)
Importers' share (fn1):						
Belgium	2.6	3.6	5.4	2.8	1.1	1.7
Korea	2.1	4.2	6.4	4.3	2.1	2.2
Saudi Arabia	---	0.4	0.5	0.5	0.4	0.1
Singapore	0.2	0.3	0.9	0.7	0.1	0.6
South Africa	2.2	2.0	2.4	0.2	(0.2)	0.4
Spain	0.5	0.8	1.8	1.3	0.3	1.0
Subject sources	7.6	11.4	17.2	9.7	3.8	5.9
Subject sources less Saudi Arabia	7.6	11.0	16.8	9.2	3.4	5.8
Nonsubject sources	1.3	1.9	0.6	(0.7)	0.6	(1.3)
Nonsubject sources plus Saudi Arabia	1.3	2.3	1.0	(0.3)	1.0	(1.2)
All import sources	8.9	13.2	17.8	9.0	4.4	4.6
U.S. imports from:						
Belgium:						
Quantity	33,670	49,626	69,176	105.5	47.4	39.4
Value	17,197	35,249	56,832	230.5	105.0	61.2
Unit value	$511	$710	$822	60.9	39.1	15.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Korea:						
Quantity	25,944	55,688	99,491	283.5	114.6	78.7
Value	13,992	40,815	67,932	385.5	191.7	66.4
Unit value	$539	$733	$683	26.6	35.9	(6.8)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Saudi Arabia:						
Quantity	---	5,550	6,746	fn2	fn2	21.5
Value	---	3,845	4,817	fn2	fn2	25.3
Unit value	---	$693	$714	fn2	fn2	3.1
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *

Table continued on next page.

Table C-1--Continued
Acetone: Summary data concerning the U.S. market, 2016-18
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. imports from:						
Singapore:						
Quantity	2,761	4,403	13,546	390.7	59.5	207.6
Value	1,669	3,057	9,590	474.4	83.1	213.7
Unit value	$605	$694	$708	17.1	14.8	2.0
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
South Africa:						
Quantity	28,601	26,761	31,216	9.1	(6.4)	16.7
Value	14,675	19,414	24,938	69.9	32.3	28.5
Unit value	$513	$725	$799	55.7	41.4	10.1
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Spain:						
Quantity	6,834	11,308	27,431	301.4	65.5	142.6
Value	3,319	7,762	18,576	459.7	133.9	139.3
Unit value	$486	$686	$677	39.4	41.3	(1.3)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Subject sources:						
Quantity	97,811	153,336	247,606	153.1	56.8	61.5
Value	50,853	110,141	182,684	259.2	116.6	65.9
Unit value	$520	$718	$738	41.9	38.2	2.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Subject sources less Saudi Arabia:						
Quantity	97,811	147,786	240,860	146.3	51.1	63.0
Value	50,853	106,297	177,867	249.8	109.0	67.3
Unit value	$520	$719	$738	42.0	38.3	2.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Nonsubject sources:						
Quantity	12,236	22,486	8,129	(33.6)	83.8	(63.8)
Value	8,847	18,125	6,258	(29.3)	104.9	(65.5)
Unit value	$723	$806	$770	6.5	11.5	(4.5)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Nonsubject sources plus Saudi Arabia:						
Quantity	12,236	28,036	14,875	21.6	129.1	(46.9)
Value	8,847	21,969	11,075	25.2	148.3	(49.6)
Unit value	$723	$784	$745	3.0	8.4	(5.0)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
All import sources:						
Quantity	110,047	175,822	255,735	132.4	59.8	45.5
Value	59,700	128,266	188,943	216.5	114.9	47.3
Unit value	$542	$730	$739	36.2	34.5	1.3
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *

Table continued on next page.

Table C-1--Continued
Acetone: Summary data concerning the U.S. market, 2016-18

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. producers':						
Average capacity quantity	1,383,994	1,493,188	1,310,652	(5.3)	7.9	(12.2)
Production quantity	1,168,219	1,195,613	1,154,964	(1.1)	2.3	(3.4)
Capacity utilization (fn1)	84.4	80.1	88.1	3.7	(4.3)	8.1
U.S. shipments:						
Quantity	1,080,430	1,061,774	1,085,547	0.5	(1.7)	2.2
Value	613,303	841,609	871,113	42.0	37.2	3.5
Unit value	$568	$793	$802	41.4	39.6	1.2
Export shipments:						
Quantity	94,584	120,576	69,418	(26.6)	27.5	(42.4)
Value	51,691	85,549	53,352	3.2	65.5	(37.6)
Unit value	$547	$710	$769	40.6	29.8	8.3
Ending inventory quantity	53,377	63,884	68,544	28.4	19.7	7.3
Inventories/total shipments (fn1)	4.5	5.4	5.9	1.4	0.9	0.5
Production workers	575	556	560	(2.6)	(3.3)	0.7
Hours worked (1,000s)	1,357	1,291	1,289	(5.0)	(4.9)	(0.2)
Wages paid ($1,000)	58,588	56,871	60,147	2.7	(2.9)	5.8
Hourly wages (dollars per hour)	$43.17	$44.05	$46.66	8.1	2.0	5.9
Productivity (short tons per 1,000 hours)	860.9	926.1	896.0	4.1	7.6	(3.2)
Unit labor costs	$50	$48	$52	3.8	(5.2)	9.5
Net sales:						
Quantity	1,180,939	1,174,614	1,148,654	(2.7)	(0.5)	(2.2)
Value	658,552	913,224	912,513	38.6	38.7	(0.1)
Unit value	$558	$777	$794	42.5	39.4	2.2
Cost of goods sold (COGS)	591,143	785,752	863,131	46.0	32.9	9.8
Gross profit or (loss)	67,409	127,472	49,382	(26.7)	89.1	(61.3)
SG&A expenses	23,642	35,388	36,402	54.0	49.7	2.9
Operating income or (loss)	43,767	92,084	12,980	(70.3)	110.4	(85.9)
Net income or (loss)	43,325	90,855	12,543	(71.0)	109.7	(86.2)
Capital expenditures	26,549	20,980	19,885	(25.1)	(21.0)	(5.2)
Unit COGS	$501	$669	$751	50.1	33.6	12.3
Unit SG&A expenses	$20	$30	$32	58.3	50.5	5.2
Unit operating income or (loss)	$37	$78	$11	(69.5)	111.5	(85.6)
Unit net income or (loss)	$37	$77	$11	(70.2)	110.8	(85.9)
COGS/sales (fn1)	89.8	86.0	94.6	4.8	(3.7)	8.5
Operating income or (loss)/sales (fn1)	6.6	10.1	1.4	(5.2)	3.4	(8.7)
Net income or (loss)/sales (fn1)	6.6	9.9	1.4	(5.2)	3.4	(8.6)

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.

Related party exclusion

Table C-2
Acetone: Summary data concerning the U.S. market excluding one U.S. producer *, 2016-18**
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. consumption quantity:						
Amount	1,190,477	1,237,596	1,341,282	12.7	4.0	8.4
Producers' share (fn1):						
Included firms	* * *	* * *	* * *	* * *	* * *	* * *
Excluded firms	* * *	* * *	* * *	* * *	* * *	* * *
All producers	90.8	85.8	80.9	(9.8)	(5.0)	(4.9)
Importers' share (fn1):						
Belgium	2.8	4.0	5.2	2.3	1.2	1.1
Korea	2.2	4.5	7.4	5.2	2.3	2.9
Saudi Arabia	---	0.4	0.5	0.5	0.4	0.1
Singapore	0.2	0.4	1.0	0.8	0.1	0.7
South Africa	2.4	2.2	2.3	(0.1)	(0.2)	0.2
Spain	0.6	0.9	2.0	1.5	0.3	1.1
Subject sources	8.2	12.4	18.5	10.2	4.2	6.1
Subject sources less Saudi Arabia	8.2	11.9	18.0	9.7	3.7	6.0
Nonsubject sources	1.0	1.8	0.6	(0.4)	0.8	(1.2)
Nonsubject sources plus Saudi Arabia	1.0	2.3	1.1	0.1	1.2	(1.2)
All import sources	9.2	14.2	19.1	9.8	5.0	4.9
U.S. consumption value:						
Amount	673,003	969,875	1,060,056	57.5	44.1	9.3
Producers' share (fn1):						
Included firms	* * *	* * *	* * *	* * *	* * *	* * *
Excluded firms	* * *	* * *	* * *	* * *	* * *	* * *
All producers	91.1	86.8	82.2	(9.0)	(4.4)	(4.6)
Importers' share (fn1):						
Belgium	2.6	3.6	5.4	2.8	1.1	1.7
Korea	2.1	4.2	6.4	4.3	2.1	2.2
Saudi Arabia	---	0.4	0.5	0.5	0.4	0.1
Singapore	0.2	0.3	0.9	0.7	0.1	0.6
South Africa	2.2	2.0	2.4	0.2	(0.2)	0.4
Spain	0.5	0.8	1.8	1.3	0.3	1.0
Subject sources	7.6	11.4	17.2	9.7	3.8	5.9
Subject sources less Saudi Arabia	7.6	11.0	16.8	9.2	3.4	5.8
Nonsubject sources	1.3	1.9	0.6	(0.7)	0.6	(1.3)
Nonsubject sources plus Saudi Arabia	1.3	2.3	1.0	(0.3)	1.0	(1.2)
All import sources	8.9	13.2	17.8	9.0	4.4	4.6
U.S. imports from:						
Belgium:						
Quantity	33,670	49,626	69,176	105.5	47.4	39.4
Value	17,197	35,249	56,832	230.5	105.0	61.2
Unit value	$511	$710	$822	60.9	39.1	15.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Korea:						
Quantity	25,944	55,688	99,491	283.5	114.6	78.7
Value	13,992	40,815	67,932	385.5	191.7	66.4
Unit value	$539	$733	$683	26.6	35.9	(6.8)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *

Table continued on next page.

Table C-2--Continued
Acetone: Summary data concerning the U.S. market excluding one U.S. producer * * *, 2016-18
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. imports from:						
Saudi Arabia:						
Quantity	---	5,550	6,746	fn2	fn2	21.5
Value	---	3,845	4,817	fn2	fn2	25.3
Unit value	---	$693	$714	fn2	fn2	3.1
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Singapore:						
Quantity	2,761	4,403	13,546	390.7	59.5	207.6
Value	1,669	3,057	9,590	474.4	83.1	213.7
Unit value	$605	$694	$708	17.1	14.8	2.0
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
South Africa:						
Quantity	28,601	26,761	31,216	9.1	(6.4)	16.7
Value	14,675	19,414	24,938	69.9	32.3	28.5
Unit value	$513	$725	$799	55.7	41.4	10.1
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Spain:						
Quantity	6,834	11,308	27,431	301.4	65.5	142.6
Value	3,319	7,762	18,576	459.7	133.9	139.3
Unit value	$486	$686	$677	39.4	41.3	(1.3)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Subject sources:						
Quantity	97,811	153,336	247,606	153.1	56.8	61.5
Value	50,853	110,141	182,684	259.2	116.6	65.9
Unit value	$520	$718	$738	41.9	38.2	2.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Subject sources less Saudi Arabia:						
Quantity	97,811	147,786	240,860	146.3	51.1	63.0
Value	50,853	106,297	177,867	249.8	109.0	67.3
Unit value	$520	$719	$738	42.0	38.3	2.7
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Nonsubject sources:						
Quantity	12,236	22,486	8,129	(33.6)	83.8	(63.8)
Value	8,847	18,125	6,258	(29.3)	104.9	(65.5)
Unit value	$723	$806	$770	6.5	11.5	(4.5)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Nonsubject sources plus Saudi Arabia:						
Quantity	12,236	28,036	14,875	21.6	129.1	(46.9)
Value	8,847	21,969	11,075	25.2	148.3	(49.6)
Unit value	$723	$784	$745	3.0	8.4	(5.0)
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
All import sources:						
Quantity	110,047	175,822	255,735	132.4	59.8	45.5
Value	59,700	128,266	188,943	216.5	114.9	47.3
Unit value	$542	$730	$739	36.2	34.5	1.3
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *

Table continued on next page.

Table C-2--Continued
Acetone: Summary data concerning the U.S. market excluding one U.S. producer * * *, 2016-18
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
Included U.S. producers':						
Average capacity quantity	* * *	* * *	* * *	* * *	* * *	* * *
Production quantity	* * *	* * *	* * *	* * *	* * *	* * *
Capacity utilization (fn1)	* * *	* * *	* * *	* * *	* * *	* * *
U.S. shipments:						
Quantity	* * *	* * *	* * *	* * *	* * *	* * *
Value	* * *	* * *	* * *	* * *	* * *	* * *
Unit value	* * *	* * *	* * *	* * *	* * *	* * *
Export shipments:						
Quantity	* * *	* * *	* * *	* * *	* * *	* * *
Value	* * *	* * *	* * *	* * *	* * *	* * *
Unit value	* * *	* * *	* * *	* * *	* * *	* * *
Ending inventory quantity	* * *	* * *	* * *	* * *	* * *	* * *
Inventories/total shipments (fn1)	* * *	* * *	* * *	* * *	* * *	* * *
Production workers	* * *	* * *	* * *	* * *	* * *	* * *
Hours worked (1,000s)	* * *	* * *	* * *	* * *	* * *	* * *
Wages paid ($1,000)	* * *	* * *	* * *	* * *	* * *	* * *
Hourly wages (dollars per hour)	* * *	* * *	* * *	* * *	* * *	* * *
Productivity (short tons per 1,000 hours)	* * *	* * *	* * *	* * *	* * *	* * *
Unit labor costs	* * *	* * *	* * *	* * *	* * *	* * *
Net sales:						
Quantity	* * *	* * *	* * *	* * *	* * *	* * *
Value	* * *	* * *	* * *	* * *	* * *	* * *
Unit value	* * *	* * *	* * *	* * *	* * *	* * *
Cost of goods sold (COGS)	* * *	* * *	* * *	* * *	* * *	* * *
Gross profit or (loss)	* * *	* * *	* * *	* * *	* * *	* * *
SG&A expenses	* * *	* * *	* * *	* * *	* * *	* * *
Operating income or (loss)	* * *	* * *	* * *	* * *	* * *	* * *
Net income or (loss)	* * *	* * *	* * *	* * *	* * *	* * *
Capital expenditures	* * *	* * *	* * *	* * *	* * *	* * *
Unit COGS	* * *	* * *	* * *	* * *	* * *	* * *
Unit SG&A expenses	* * *	* * *	* * *	* * *	* * *	* * *
Unit operating income or (loss)	* * *	* * *	* * *	* * *	* * *	* * *
Unit net income or (loss)	* * *	* * *	* * *	* * *	* * *	* * *
COGS/sales (fn1)	* * *	* * *	* * *	* * *	* * *	* * *
Operating income or (loss)/sales (fn1)	* * *	* * *	* * *	* * *	* * *	* * *
Net income or (loss)/sales (fn1)	* * *	* * *	* * *	* * *	* * *	* * *

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 2914.11.1000 and 2914.11.5000, accessed March 12, 2019.