

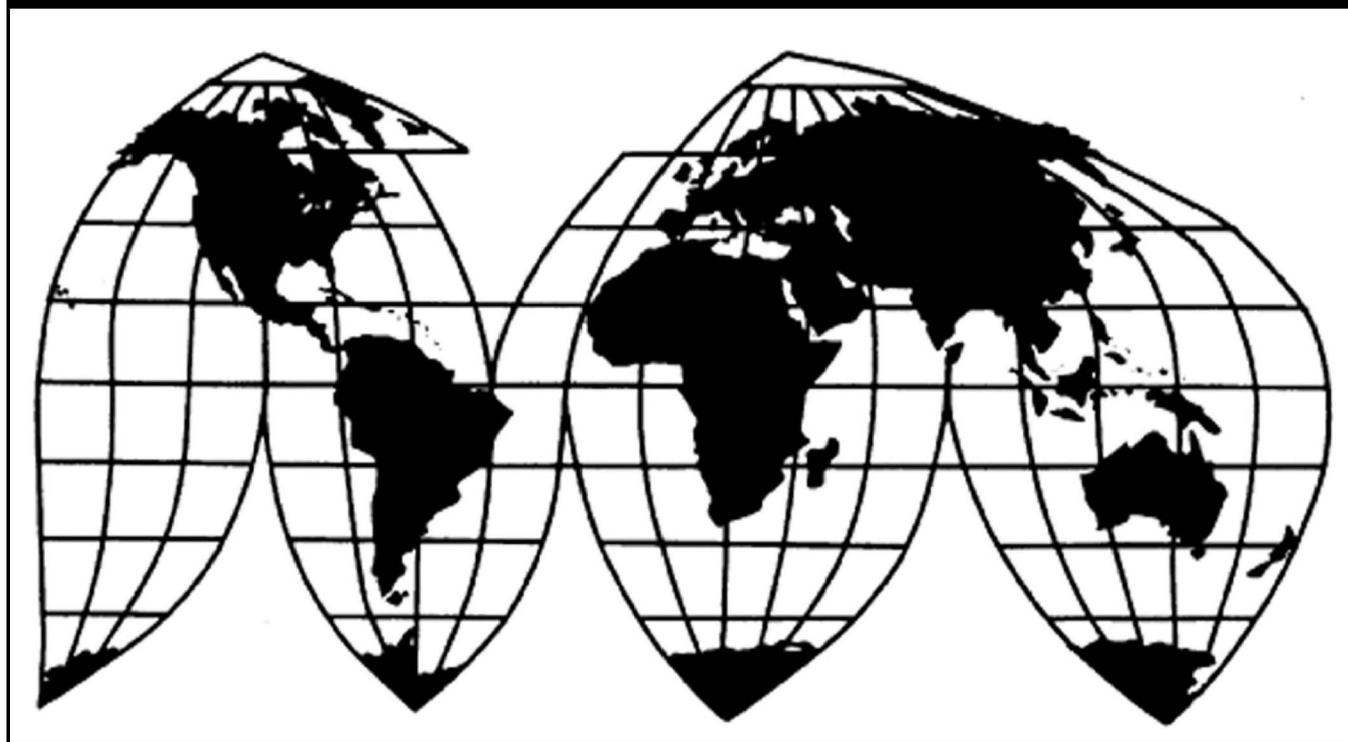
Phosphor Copper from South Korea

Investigation No. 731-TA-1314 (Review)

Publication 5377

October 2022

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1314 (Review)

Phosphor Copper from South Korea

DETERMINATION

On the basis of the record¹ developed in the subject five-year review, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that revocation of the antidumping duty order on phosphor copper from South Korea would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted this review on March 1, 2022 (87 FR 11467) and determined on June 6, 2022 that it would conduct an expedited review (87 FR 57517, September 20, 2022).

¹ The record is defined in § 207.2(f) of the Commission’s Rules of Practice and Procedure (19 CFR 207.2(f)).

Views of the Commission

Based on the record in this five-year review, we determine under section 751(c) of the Tariff Act of 1930, as amended (“the Tariff Act”), that revocation of the antidumping duty order on phosphor copper from South Korea would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

Original Investigation. In April 2017, the Commission determined that a domestic industry was injured by reason of less than fair value imports of phosphor copper from Korea.¹ The Department of Commerce (“Commerce”) subsequently issued an antidumping duty order on phosphor copper from Korea on April 24, 2017.²

Current Review. The Commission instituted this review on March 1, 2022.³ The Commission received a response to its notice of institution from Metallurgical Products Company (“Metallurgical Products”), a domestic producer of phosphor copper.⁴ The Commission did not receive a response to the notice of institution from any respondent interested party.⁵ On June 6, 2022 the Commission determined that the domestic interested party group response to the notice of institution was adequate and that the respondent

¹ *Phosphor Copper from Korea*, Inv. No. 731-TA-1314 (Final), USITC Pub. 4681 (Apr. 2017) (“*Original Determination*”); see also *Phosphor Copper from Korea*, 82 Fed. Reg. 18668 (Apr. 20, 2017).

² *Phosphor Copper From Korea: Antidumping Duty Order*, 82 Fed. Reg. 18893 (Apr. 24, 2017).

³ *Phosphor Copper From Korea; Institution of a Five-Year Review*, 87 Fed. Reg. 11467 (Mar. 1, 2022).

⁴ Metallurgical Products’ Response to the Commission’s Notice of Institution, EDIS Doc. 767017 (Mar. 30, 2022) (“Response”); Metallurgical Products’ Supplemental Response to the Commission’s Notice of Institution, EDIS Doc. 768154 (Apr. 13, 2022) (“Supplemental Response”). Metallurgical Products also submitted comments on adequacy requesting the Commission to expedite this review. Metallurgical Products’ Comments on Adequacy, EDIS Doc. 770727 (May 13, 2022).

⁵ Confidential Report (“CR”) INV-UU-055 (May 25, 2022), Public Report (“PR”) at I-2.

interested party group response was inadequate.⁶ Finding that no other circumstances warranted conducting a full review, the Commission determined to conduct an expedited review of the antidumping order.⁷ Metallurgical Products submitted comments pursuant to Commission rule 207.62(d)(1) regarding the determination that the Commission should reach.⁸

U.S. industry data in this review are based on Metallurgical Products' response to the notice of institution, which is believed to account for *** percent of the total U.S. production of phosphor copper during 2021.⁹ U.S. import data and related information in this review are based on Commerce's official import statistics and questionnaire responses received from the original investigations.¹⁰ Foreign industry data and related information are based on information from Metallurgical Products and a questionnaire response from the original investigations, as well as publicly available information gathered by Commission staff.¹¹ Four firms, ***, identified by Metallurgical Products as leading U.S. phosphor copper purchasers, responded to the adequacy phase questionnaire.¹²

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."¹³ The Tariff Act defines "domestic like

⁶ Explanation of Commission Determination on Adequacy, EDIS Doc. 774636.

⁷ *Phosphor Copper From South Korea; Scheduling of an Expedited Five-Year Review*, 87 Fed. Reg. 57517 (Sept. 20, 2022).

⁸ Metallurgical Products Final Comments, EDIS Doc. 780847 (Sept. 22, 2022) ("Final Comments").

⁹ CR/PR at Table I-2.

¹⁰ CR/PR at Tables I-7, I-8.

¹¹ See generally CR/PR at I-13 – I-14.

¹² CR/PR at Appendix D.

¹³ 19 U.S.C. § 1677(4)(A).

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 under this subtitle.”¹⁴ The Commission’s practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.¹⁵

Commerce has defined the imported merchandise within the scope of the order under review as follows:

The merchandise covered by this investigation is master alloys of copper containing between five percent and 17 percent phosphorus by nominal weight, regardless of form (including but not limited to shot, pellet, waffle, ingot, or nugget), and regardless of size or weight. Subject merchandise consists predominantly of copper (by weight), and may contain other elements, including but not limited to iron (Fe), lead (Pb), or tin (Sn), in small amounts (up to one percent by nominal weight). Phosphor copper is frequently produced to JIS H2501 and ASTM B-644, Alloy 3A standards or higher; however, merchandise covered by this investigation includes all phosphor copper, regardless of whether the merchandise meets, fails to meet, or exceeds these standards.

Merchandise covered by this investigation is currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) under subheading 7405.00.1000. This HTSUS subheading is provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.¹⁶

¹⁴ 19 U.S.C. § 1677(10); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int’l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int’l Trade 1990), *aff’d*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

¹⁵ *See, e.g., Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

¹⁶ *Phosphor Copper From the Republic of Korea: Final Results of the First Expedited Sunset Review of the Antidumping Duty Order*, 87 Fed. Reg. 40502 (July 7, 2022) (footnote omitted). The (Continued...)

Phosphor copper is composed primarily of copper and phosphorus.¹⁷ It is a master alloy, which is not suitable for further working into other products (*i.e.*, it is not “usefully malleable”), but rather is used as an additive in the manufacture of other alloys or as a deoxidizing agent.¹⁸ The phosphor content cannot exceed, and generally is, 15 percent by weight.¹⁹ Phosphor copper is sold in two forms: shot (small pellets) and ingot/waffle (waffle casting with a grid of crossed indentations on the surface), and is used as a deoxidizer, as an alloying additive, and in production of brazing alloys.²⁰

In its original determination, the Commission defined a single domestic like product, coextensive with the scope of investigation.²¹ The Commission considered and rejected defining the domestic like product more broadly than the scope of investigation to include copper phosphide.²² Specifically, the Commission found that phosphor copper and copper phosphide appear to be physically and chemically distinct from each other and both products have distinct end uses.²³ The Commission found that both products involve separate and distinct production processes and both are sold to different customers through distinct

omitted footnote explains, “[a] ‘master alloy’ is a base metal, such as copper, to which a relatively high percentage of one or two other elements is added.” *Id.* at n.7.

¹⁷ CR/PR at I-5.

¹⁸ CR/PR at I-5.

¹⁹ CR/PR at Tables I-3, I-4.

²⁰ CR/PR at I-5 – I-8.

²¹ *Original Determination*, USITC Pub. at 5-6, *see also Phosphor Copper from Korea*, Inv. No. 731-TA-1314 (Preliminary), USITC Pub. 4608 (May 2016) (“*Preliminary Determination*”) at 6-7.

²² *Original Determination*, USITC Pub. at 5, *see also Preliminary Determination*, USITC Pub. 4608 at 6-7.

²³ *Original Determination*, USITC Pub. at 5, *see also Preliminary Determination*, USITC Pub. 4608 at 6.

channels of distribution.²⁴ It also found that both products are not interchangeable due to the distinct end uses, and that producers and customers do not perceive the two products as interchangeable.²⁵

In this review, no new facts have been presented to warrant revisiting the definition of the domestic like product in the original determination, and Metallurgical Products agrees with the Commission's prior definition of the domestic like product.²⁶ We therefore continue to define a single domestic like product, coextensive with Commerce's scope.

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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."²⁷ 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.

²⁴ *Original Determination*, USITC Pub. at 5-6, *see also Preliminary Determination*, USITC Pub. 4608 at 7.

²⁵ *Original Determination*, USITC Pub. at 5-6, *see also Preliminary Determination*, USITC Pub. 4608 at 7.

²⁶ Response at 18.

²⁷ 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

There were no related party issues or other domestic industry issues in the original investigation.²⁸ Consequently, the Commission defined the domestic industry as consisting of all domestic producers of phosphor copper.²⁹

In this review, no new facts have been presented that would warrant a different definition of the domestic industry from the original determination. Metallurgical Products indicated its agreement with the Commission's prior definition of the domestic industry, *i.e.*, as all U.S. producers of phosphor copper.³⁰ It also stated that no U.S. producer of phosphor copper qualifies as a related party under the statute.³¹ Therefore, consistent with our definition of the domestic like product, and absent any argument to the contrary, we define the domestic industry to include all producers of phosphor copper.

III. Revocation of the Antidumping Duty Order Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely

²⁸ *Original Determination*, USITC Pub. at 6, *see also Preliminary Determination*, USITC Pub. 4608 at 7-8.

²⁹ *Original Determination*, USITC Pub. at 6.

³⁰ Response at 16; Supplemental Response at 2-3.

³¹ Response at 16 (stating that "{n}one of the U.S. producers of phosphor copper are related to a producer or exporter of the subject merchandise in Korea.").

to lead to continuation or recurrence of material injury within a reasonably foreseeable time.”³²

The SAA states that “under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports.”³³ Thus, the likelihood standard is prospective in nature.³⁴ The U.S. Court of International Trade has found that “likely,” as used in the five-year review provisions of the Act, means “probable,” and the Commission applies that standard in five-year reviews.³⁵

The statute states that “the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time.”³⁶ According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but

³² 19 U.S.C. § 1675a(a).

³³ SAA at 883-84. The SAA states that “{t}he likelihood of injury standard applies regardless of the nature of the Commission’s original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed.” *Id.* at 883.

³⁴ While the SAA states that “a separate determination regarding current material injury is not necessary,” it indicates that “the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked.” SAA at 884.

³⁵ See *NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int’l Trade 2003) (“‘likely’ means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)”), *aff’d mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) (“more likely than not” standard is “consistent with the court’s opinion;” “the court has not interpreted ‘likely’ to imply any particular degree of ‘certainty’”); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) (“standard is based on a likelihood of continuation or recurrence of injury, not a certainty”); *Usinor v. United States*, 26 CIT 767, 794 (2002) (“‘likely’ is tantamount to ‘probable,’ not merely ‘possible’”).

³⁶ 19 U.S.C. § 1675a(a)(5).

normally will exceed the ‘imminent’ timeframe applicable in a threat of injury analysis in original investigations.”³⁷

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to “consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated.”³⁸ It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).³⁹ The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission’s determination.⁴⁰

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed

³⁷ SAA at 887. Among the factors that the Commission should consider in this regard are “the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities.” *Id.*

³⁸ 19 U.S.C. § 1675a(a)(1).

³⁹ 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings. See Phosphor Copper From the Republic of Korea: Final Results of the First Expedited Sunset Review of the Antidumping Duty Order, 87 Fed. Reg. 40502 (July 7, 2022) and accompanying Issues and Decisions Memorandum at 6-7, EDIS Doc. 781235.

⁴⁰ 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.⁴¹ In doing so, the Commission must consider “all relevant economic factors,” including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.⁴²

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.⁴³

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the

⁴¹ 19 U.S.C. § 1675a(a)(2).

⁴² 19 U.S.C. § 1675a(a)(2)(A-D).

⁴³ See 19 U.S.C. § 1675a(a)(3). The SAA states that “{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices.” SAA at 886.

industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.⁴⁴ All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.⁴⁵

No respondent interested party participated in this expedited review.⁴⁶ The record, therefore, contains limited new information with respect to the phosphor copper industry in South Korea and the United States during the period of review. Accordingly, for our determination, we rely as appropriate on the facts available from the original investigation and the limited new information on the record in this first five-year review.

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors

⁴⁴ 19 U.S.C. § 1675a(a)(4).

⁴⁵ The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission “considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.” SAA at 885.

⁴⁶ CR/PR at I-13.

“within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”⁴⁷ The following conditions of competition inform our determination.

1. Demand Conditions

Original Investigation. The Commission found that demand for phosphor copper is driven primarily by the consumption of copper products, in which it is used as a deoxidizer, as an alloying additive, and in production of brazing alloys.⁴⁸ The largest end use of phosphor copper was reported to be for copper tubing, followed by brazing rods and alloys, and then other specialty copper uses.⁴⁹ Responses from U.S. producers, importers, and purchasers in the original investigation differed on whether U.S. demand for phosphor copper changed from 2013 to September 2016.⁵⁰ The Commission found that apparent U.S. consumption of phosphor copper fluctuated annually during the original period of investigation, but was at relatively the same level in 2015 as 2013 and in January-September (“interim”) 2016 as interim 2015.⁵¹

Current Review. There is no information in the record of this review of any changes in the drivers of phosphor copper demand from those that the Commission found in the original investigation.⁵² Apparent U.S. consumption of phosphor copper was approximately *** pounds in 2021, which is lower than in the final year of the original investigation.⁵³

⁴⁷ 19 U.S.C. § 1675a(a)(4).

⁴⁸ *Original Determination*, USITC Pub. at 11.

⁴⁹ *Original Determination*, USITC Pub. at 11.

⁵⁰ *Original Determination*, USITC Pub. at 11.

⁵¹ *Original Determination*, USITC Pub. at 11.

⁵² CR/PR at I-6; *see also* Final Comments at 4; Response at 18; Supplemental Response at 2.

⁵³ CR/PR at Table I-8. Apparent U.S. consumption of phosphor copper was *** pounds in 2015.

Id.

Metallurgical Products contends that the conditions of competition have not changed significantly since the final determination and are unlikely to change significantly within a reasonably foreseeable time.⁵⁴ It maintains that demand for phosphor copper “has been stable” since the original investigation.⁵⁵ Metallurgical Products also contends that the end users, including leading U.S. purchasers, of phosphor copper have likewise “remained stable” since the original investigation.⁵⁶

Purchasers responding to the adequacy phase questionnaire reported mixed responses regarding changes in demand.⁵⁷ Two of these four firms – *** – reported that ***.⁵⁸ One firm, *** reported that ***.⁵⁹ One purchaser, ***, reported that ***.⁶⁰

2. Supply Conditions

Original Investigation. The Commission found that the domestic industry was the largest source of phosphor copper to the U.S. market over the period of investigation. The domestic industry’s share of apparent U.S. consumption decreased from 2013 to 2015 and was lower in interim 2016 than in interim 2015.⁶¹ The Commission observed that there were three U.S. producers of phosphor copper and noted that, while the domestic industry’s production remained stable, it was operating well below full capacity during the period of investigation. It

⁵⁴ Response at 18; Supplemental Response at 2-4; Final Comments at 4.

⁵⁵ Supplemental Response at 2; Final Comments at 6.

⁵⁶ Supplemental Response at 2; Final Comments at 6.

⁵⁷ CR/PR at Appendix D.

⁵⁸ CR/PR at Appendix D.

⁵⁹ CR/PR at Appendix D.

⁶⁰ CR/PR at Appendix D.

⁶¹ *Original Determination*, USITC Pub. at 11-12.

also observed that there generally were no reported supply disruptions or constraints with respect to U.S. producers during that time.⁶²

The Commission also found that subject imports were the next largest source of supply to the U.S. phosphor copper market during the period of investigation. Subject imports' share of apparent U.S. consumption increased from 2013 to 2015 and was higher in interim 2016 than in interim 2015.⁶³ The Commission also observed that the respondent was the sole producer of phosphor copper in South Korea.⁶⁴

The Commission found that nonsubject imports were a very small source of supply to the U.S. market in 2013 and interim 2016 and were not present in 2014 and 2015.⁶⁵

Current Review. The domestic industry was the largest source of supply in the U.S. market in 2021, accounting for *** percent of apparent U.S. consumption by quantity, which was higher than the industry's share of apparent U.S. consumption in the final year of the original period of investigation.⁶⁶ Subject imports exited the U.S. market after 2018; there were none in 2021.⁶⁷ Nonsubject imports accounted for *** percent of apparent U.S. consumption by quantity in 2021, a higher proportion than in the final year of the original period of

⁶² *Original Determination*, USITC Pub. at 11-12.

⁶³ *Original Determination*, USITC Pub. at 12.

⁶⁴ *Original Determination*, USITC Pub. at 12.

⁶⁵ *Original Determination*, USITC Pub. at 12.

⁶⁶ CR/PR at Table I-8.

⁶⁷ CR/PR at Tables I-7, I-8. The volume of subject imports declined from 1.5 million pounds in 2016 to 827,542 pounds in 2017 and to 277,782 pounds in 2018; there were no reported subject imports in 2019, 2020, and 2021. CR/PR at Table I-7.

investigation.⁶⁸ In 2021, the United Kingdom and India were the largest sources of nonsubject imports.⁶⁹

Metallurgical Products asserts that the supply of phosphor copper “has been stable” since the original investigation, with the domestic industry’s capacity being adequate to meet U.S. demand.⁷⁰ Metallurgical Products was purchased by the H. Kramer Company in 2021, ***.⁷¹ According to Metallurgical Products, it is still the largest producer of phosphor copper in the United States, and it identifies one other domestic producer of phosphor copper in addition to itself, Milward Alloys.⁷² Metallurgical Products claims that, as a result of the disciplining effect of the antidumping duty order on phosphor copper from South Korea, there are no current imports of subject merchandise.⁷³

Two of the four responding purchasers – *** – reported that ***.⁷⁴ One purchaser, ***, reported that ***.⁷⁵ ***.⁷⁶

3. Substitutability and Other Conditions

Original Investigation. The Commission found that there is a high degree of substitutability between domestically produced phosphor copper and subject imports during

⁶⁸ CR/PR at Table I-8. The share of apparent U.S. consumption held by nonsubject imports was *** in 2015. *Id.* The volume of nonsubject imports fluctuated throughout the period of review; it was 31,169 pounds in 2016, 361,540 pounds in 2017, 44,000 pounds in 2018, 661 pounds in 2019, 17,313 pounds in 2020, and 24,804 pounds in 2021. CR/PR at Table I-7.

⁶⁹ CR/PR at Table I-7.

⁷⁰ Supplemental Response at 2-3; Final Comments at 5.

⁷¹ Supplemental Response at 2-3; CR/PR at Table I-5.

⁷² Response at 16; Final Comments at 3.

⁷³ Response at 16.

⁷⁴ CR/PR at Appendix D.

⁷⁵ CR/PR at Appendix D.

⁷⁶ CR/PR at Appendix D.

the original investigation.⁷⁷ It observed that domestically produced and imported phosphor copper are generally produced to the same standard specifications—JIS H2501 or ASTM B-644, Alloy 3A standards.⁷⁸ All responding U.S. producers, importers, and purchasers reported that phosphor copper is either always or frequently interchangeable, regardless of source.⁷⁹ The Commission also noted that a majority of purchasers also indicated that the domestic like product and subject imports are comparable with respect to all purchasing factors except delivery time and price.⁸⁰

The Commission further found that price is an important factor in purchasing decisions, and was cited most often as one of purchasers' top three factors affecting purchasing decisions, followed by quality and availability/delivery/lead time.⁸¹ It also observed that, in rating the importance of 15 factors in purchasing decisions, only availability (13 purchasers) and quality meeting industry standards (13 purchasers) were reported more frequently than price (12 purchasers) as a very important factor.⁸²

The Commission observed that phosphor copper is composed primarily of copper and phosphorus, with copper as the principal raw material.⁸³ It found that raw materials are a large component of the cost of phosphor copper production and that the prices for both copper and phosphorus declined during the original period of investigation.⁸⁴

⁷⁷ *Original Determination*, USITC Pub. at 12.

⁷⁸ *Original Determination*, USITC Pub. at 12.

⁷⁹ *Original Determination*, USITC Pub. at 12.

⁸⁰ *Original Determination*, USITC Pub. at 12.

⁸¹ *Original Determination*, USITC Pub. at 12-13.

⁸² *Original Determination*, USITC Pub. at 13.

⁸³ *Original Determination*, USITC Pub. at 13.

⁸⁴ *Original Determination*, USITC Pub. at 13.

Current Review. Metallurgical Products maintains that phosphor copper is highly substitutable regardless of source and that price continues to be an important purchasing factor.⁸⁵ It contends that there have been no significant technological developments and that the phosphor copper industry is mature and well established.⁸⁶ The record in this review contains no new information to indicate that the high degree of substitutability between the domestic like product and subject imports or the importance of price in purchasing decisions has changed since the original investigation.^{87 88} Accordingly, we again find that there is a high degree of substitutability between domestically produced phosphor copper and subject imports and that price continues to be an important factor in purchasing decisions.

C. Likely Volume of Subject Imports

Original Investigation. In its original investigation, the Commission found that subject imports increased substantially during the period of investigation.⁸⁹ It found that the share of apparent U.S. consumption held by subject imports also increased and that, due to the near total absence of nonsubject imports, the increase came almost entirely at the expense of the domestic industry.⁹⁰ Accordingly, the Commission concluded that the volume of subject imports and the increase in that volume were significant in both absolute terms and relative to consumption in the United States.⁹¹

⁸⁵ Final Comments at 6.

⁸⁶ Supplemental Response at 2-3; Final Comments at 6.

⁸⁷ *Original Determination*, USITC Pub. at 12-13.

⁸⁸ Phosphor copper from South Korea is not subject to additional duties under Section 232 of the Trade Expansion Act of 1962, which apply only to products of aluminum and steel. See CR/PR at I-4.

⁸⁹ *Original Determination*, USITC Pub. at 14.

⁹⁰ *Original Determination*, USITC Pub. at 14.

⁹¹ *Original Determination*, USITC Pub. at 14.

Current Review. The record in the current review indicates that the order has had a disciplining effect on the volume of subject imports. During the period of review, the volume of subject imports declined from 1.5 million pounds in 2016 to 827,542 pounds in 2017 and 277,782 pounds in 2018, and there were no reported imports in 2019, 2020, or 2021.⁹² By contrast, in the original investigation, the volume of subject imports increased from *** pounds in 2013 to *** pounds in 2014 and *** pounds in 2015.⁹³

The record contains limited information on the phosphor copper industry in South Korea. During the original investigation, the Commission received a foreign producer questionnaire from one firm, Bongsan, which accounted for all known production of phosphor copper in South Korea and all exports of phosphor copper to the United States.⁹⁴ As indicated above, no producer or exporter of subject merchandise participated in this review; however, Metallurgical Products maintains that there is still only one producer of subject merchandise in South Korea, Bongsan.⁹⁵ It submits that Bongsan has the capacity and incentive to resume significant exports of subject merchandise to the United States if the order were revoked.⁹⁶ During the original investigation, Bongsan's reported capacity was *** pounds in 2013 through 2015, and it projected increasing its capacity to *** pounds in 2016 before returning to *** pounds in 2017.⁹⁷ There is no information in the current review suggesting a decline in

⁹² CR/PR at Table I-7.

⁹³ CR/PR at Table I-8.

⁹⁴ CR/PR at I-13.

⁹⁵ Response at 16.

⁹⁶ Response at 9-10.

⁹⁷ *Original Determination*, Confidential Report, EDIS Doc. 769897, at Table VII-1. ***. *Id.* at VII-4 n.11.

Bongsan's capacity or in its ability to rapidly increase its capacity and production since the original investigation.

Moreover, the phosphor copper industry in South Korea appears to continue to be a significant exporter, ranking as the fourth largest exporter of master alloys of copper, a category that includes phosphor copper and out-of-scope products, in 2020. Global Trade Atlas ("GTA") data indicates that exports of master alloys of copper under HTSUS subheading 7405.00, which is a category that includes subject merchandise as well as out-of-scope products, increased overall during the period of review.⁹⁸ The record also suggests that the United States will be an attractive market if the order were revoked. According to GTA data for exports from South Korea during the 2013 through 2021 (the time period covered by the original investigation and the current review), exports to the United States accounted for the highest volume of exports to a single destination market in a single year. In the original investigation, 1.7 million pounds of product were reported to be exported to the United States in 2015,⁹⁹ the next highest level of exports to another single destination market was in 2016, in which 1.3 million pounds were reported to be exported to Japan.¹⁰⁰

Given the rapid increase in the volume and market share of subject imports during the original investigation, the disciplining effect of the order, the subject producer's capacity and exports, and the attractiveness of United States as an export market, we find that the volume

⁹⁸ CR/PR at Table I-9. GTA data show export volumes of 5.6 million pounds in 2016, 4.7 million pounds in 2017, 4.4 million pounds in 2018, 4.7 million pounds in 2019, 4.8 million pounds in 2020, and 6.2 million pounds in 2021. *Id.*

⁹⁹ *Original Determination*, USITC Pub. 4681 at Table VII-3.

¹⁰⁰ CR/PR at Table I-9.

of subject imports, both in absolute terms and relative to U.S. consumption, would likely be significant if the order were revoked.¹⁰¹

D. Likely Price Effects

Original Investigation. The Commission found that the pricing data showed consistent underselling by subject imports during the original period of investigation.¹⁰² The Commission further observed that, in response to the Commission's lost sales and lost revenue survey, several responding purchasers reported that price was a primary reason that they had purchased subject imports from South Korea instead of the domestic like product.¹⁰³ Given the prevalence of underselling reported during the period of investigation, the importance of price in purchasing decisions, and the reported purchases of subject imports instead of domestic product primarily due to price, the Commission found the underselling by subject imports to be significant.¹⁰⁴ Accordingly, the Commission concluded that there was significant underselling of

¹⁰¹ Due to the lack of participation by subject producers in this review, there is no new information available that addresses existing inventories of subject merchandise or the potential for product-shifting in the subject country. Also, based on the available information, phosphor copper from South Korea is not subject to antidumping or countervailing duty investigations outside of the United States. CR/PR at I-14.

¹⁰² *Original Determination*, USITC Pub. at 15-16.

¹⁰³ *Original Determination*, USITC Pub. at 16.

¹⁰⁴ *Original Determination*, USITC Pub. at 16. The Commission also examined price trends. It observed that prices for both domestically produced pricing products declined during the period of investigation; however, copper prices, which make up the bulk of producers' raw material costs and are an indexed component in the sales price for phosphor copper, also declined during that time. In light of this, the Commission stated that it could not conclude that lower-priced subject imports caused the observed price declines for domestically produced phosphor copper and therefore did not find that subject imports depressed prices for the domestic like product to a significant degree. The Commission also recognized that the industry's cost of goods sold (COGS) to net sales ratio increased in the last two years of the period of investigation. It observed, however, that during this time as raw material costs declined and demand was relatively stable, price increases would not have been likely in this market. Consequently, it did not find that subject imports prevented price increases which otherwise would have occurred to a significant degree. *Id.*

the domestic like product by the subject imports and that the subject imports gained market share at the expense of the domestic industry.¹⁰⁵

Current Review. As previously discussed in Section III.B.3., we continue to find that there is a high degree of substitutability between domestically produced phosphor copper and subject imports and that price continues to be an important factor in purchasing decisions. The record does not contain new pricing comparisons. We have found, however, that the volume of subject imports would likely be significant if the order were revoked. Given the high degree of substitutability between domestically produced phosphor copper and subject imports and the importance of price in purchasing decisions, we find that, if the order under review were revoked, the likely significant volume of subject imports likely would significantly undersell the domestic like product, as was observed in the original investigation.¹⁰⁶ This would likely result in subject imports gaining sales and market share at the expense of the domestic industry or having depressing or suppressing effects on prices for the domestic like product by forcing the domestic industry to lower prices, forego price increases, or risk losing market share. In light of these considerations, we conclude that subject imports would likely have significant price effects upon revocation of the order.

¹⁰⁵ *Original Determination*, USITC Pub. at 16.

¹⁰⁶ In the original investigation, subject imports undersold the domestic like product in 16 of 20 possible quarterly comparisons, or 80 percent of total comparisons. *Original Determination*, USITC Pub. at 15. In total, there were *** pounds of subject imports involved in underselling comparisons and *** pounds involved in overselling comparisons. *Original Determination*, Confidential Views, EDIS Doc. 769899, at 20.

E. Likely Impact

Original Investigation. In its original investigation, the Commission found that as the volume and market penetration of the low-priced subject imports increased, U.S. producers' share of apparent U.S. consumption fell.¹⁰⁷ The Commission further found that most indicators of the domestic industry's performance suffered declines from 2014 to 2015 and declined overall from 2013 to 2015; output and revenues also were lower in interim 2016 than in interim 2015. The Commission observed that the domestic industry's capacity remained stable over the period of investigation, while production, capacity utilization, and commercial U.S. shipments initially increased from 2013 to 2014 and then decreased in 2015 and were lower in interim 2016 compared to interim 2015.¹⁰⁸

The domestic industry's number of production-related workers decreased during the period of investigation and while other employment-related indicators fluctuated during that time, all indicators were lower in 2015 than in 2013, and most were lower in interim 2016 than in interim 2015.¹⁰⁹ The Commission also found that domestic industry's sales revenues, operating income, operating margins, gross profit, and net income all showed declines in each full year of the period of investigation.¹¹⁰ The industry's capital expenditures fluctuated annually and increased overall.¹¹¹

¹⁰⁷ *Original Determination*, USITC Pub. at 17.

¹⁰⁸ *Original Determination*, USITC Pub. at 17-18. The Commission also observed that U.S. producers' end-of-period inventories decreased from 2013 to 2014 and 2015; they were higher in interim 2015 than in interim 2016. *Id.* at n. 98. It also noted that the ratio of inventories to production, as well as the ratio of inventories to U.S. shipments, decreased from 2013 to 2014, increased from 2014 to 2015, and were lower in interim 2016 than in interim 2015. *Id.*

¹⁰⁹ *Original Determination*, USITC Pub. at 18.

¹¹⁰ *Original Determination*, USITC Pub. at 18.

¹¹¹ *Original Determination*, USITC Pub. at 18.

Based on the foregoing, the Commission found that the significant and increased volumes of subject imports that pervasively undersold the domestic like product led to declines in the domestic industry's market share during the period of investigation. It further found that the domestic industry's loss of market share to subject imports caused the industry's indicia related to output, revenue, and financial performance to decline to levels worse than they would have been otherwise, and these declines occurred despite relatively stable apparent U.S. consumption. It accordingly concluded that subject imports had a significant impact on the domestic industry.¹¹²

The Commission also considered the role of other factors so as not to attribute injury from other factors to the subject imports.¹¹³ It observed that apparent U.S. consumption for phosphor copper remained relatively stable during the period of investigation, so the declines in the domestic industry's condition cannot be explained by declines in consumption.¹¹⁴ It further observed that nonsubject imports, which had only a minimal presence in the U.S. market in 2013 and interim 2016, and were absent in 2014 and 2015, also cannot explain the market share that the domestic industry lost during the period of investigation to increasing subject imports.¹¹⁵ Additionally, while the Commission recognized that the domestic industry experienced declines in its export shipments from 2014 to 2015 that affected its output and

¹¹² *Original Determination*, USITC Pub. at 18-19.

¹¹³ *Original Determination*, USITC Pub. at 19-20.

¹¹⁴ *Original Determination*, USITC Pub. at 19.

¹¹⁵ *Original Determination*, USITC Pub. at 19.

revenues, the Commission noted that the domestic industry's commercial U.S. shipments also declined, as subject imports gained market share at the expense of the domestic industry.¹¹⁶

Current Review. The record regarding the domestic industry's condition is limited to the data that Metallurgical Products provided in response to the notice of institution. The record indicates that some indicators of the domestic industry's performance were better in 2021 than in 2015, the last full year of the original period of investigation. In 2021, the domestic industry's production capacity was *** pounds, its production was *** pounds, and its capacity utilization rate was *** percent.¹¹⁷ The industry's domestic shipments were *** pounds.¹¹⁸ Its net sales revenue was \$***.¹¹⁹ Its gross profits were \$***, and its operating income was \$***, with an operating income margin of *** percent.¹²⁰ The limited record in this review contains insufficient information for us to determine whether the domestic industry is vulnerable to the continuation or recurrence of material injury in the event of revocation of the order.

¹¹⁶ *Original Determination*, USITC Pub. at 19. The Commission also considered and rejected a number of arguments by Respondents. In particular, Respondents argued that the domestic like product has significant lead time advantages, which makes subject imports less valuable. The Commission however, observed that subject imports had been kept in U.S. importer inventory starting in 2015, which reduced the domestic industry's advantage in terms of lead time, and that any lead time advantages for the domestic product do not explain why subject imports gained market share at the expense of the domestic industry. The Commission also was not persuaded by Respondents' argument that a purchaser reported purchasing subject imports to diversify its supply source, noting that throughout the period of investigation, the domestic industry had excess capacity, the record did not indicate there were domestic supply limitations, and that this alleged purchasing strategy did not explain the significant underselling by subject imports. *Id.* at 20.

¹¹⁷ CR/PR at Table I-6. In 2015, the domestic industry's production capacity was *** pounds, its production was *** pounds, and its capacity utilization rate was *** percent. *Id.*

¹¹⁸ CR/PR at Table I-6. In 2015, the industry's domestic shipments were *** pounds. *Id.*

¹¹⁹ CR/PR at Table I-6. In 2015, its net sales revenue was \$***. *Id.*

¹²⁰ CR/PR at Table I-6. In 2015, its gross profits were \$***, and its operating income was ***, with an operating income margin of *** percent. *Id.*

Based on the information available in this review, we find that revocation of the order would likely lead to a significant volume of subject imports and that these imports would likely undersell the domestic like product to a significant degree, resulting in significant depression or suppression of prices for the domestic like product and/or a loss of market share for the domestic industry. This, in turn, would adversely affect the domestic industry's production, shipments, sales, and revenue. These reductions would likely have a direct adverse impact on the domestic industry's profitability, employment levels, and its ability to raise capital and make and maintain necessary capital investments.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports, so as not to attribute likely injury from other factors to the subject imports. The volume of nonsubject imports fluctuated throughout the period of review, but declined substantially overall from its peak level in 2017. The volume of nonsubject imports was 31,169 pounds in 2016; 361,540 pounds in 2017; 44,000 pounds in 2018; 661 pounds in 2019; 17,313 pounds in 2020; and 24,804 pounds in 2021.¹²¹ In 2021, nonsubject imports accounted for *** percent of apparent U.S. consumption by quantity.¹²² Given the degree of substitutability between the subject imports and the domestic like product and the importance of price, and the fact that the domestic industry supplies the majority of the U.S. market, the likely increase in subject imports in the event of revocation would likely take market share from the domestic industry or have price depressing or suppressing effects. Therefore, the subject imports are likely to have adverse effects on the domestic industry, distinct from any adverse

¹²¹ CR/PR at Table I-7.

¹²² CR/PR at Table I-8.

effects nonsubject imports may have on the domestic industry in the event of revocation, notwithstanding the fluctuations in the volume of nonsubject imports observed during the period of review.¹²³

Accordingly, we conclude that, if the order were revoked, likely subject imports would likely have a significant impact on the domestic industry within a reasonably foreseeable time.

IV. Conclusion

For the above reasons, we determine that revocation of the antidumping duty order on phosphor copper from South Korea would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

¹²³ We note that even at its peak in 2017, the volume of nonsubject imports at 361,540 pounds was substantially lower than the domestic industry's reported U.S. shipments in 2021, which was *** pounds. CR/PR at Tables I-6, I-7.

Information obtained in this review

Background

On March 1, 2022, the U.S. International Trade Commission (“Commission”) gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended (“the Act”),¹ that it had instituted a review to determine whether revocation of the antidumping duty order on phosphor copper from South Korea would likely lead to the continuation or recurrence of material injury.² All interested parties were requested to respond to this notice by submitting certain information requested by the Commission.^{3 4} Table I-1 presents information relating to the background and schedule of this proceeding:

Table I-1
Phosphor copper: Information relating to the background and schedule of this proceeding

Effective date	Action
March 1, 2022	Notice of initiation by Commerce (87 FR 11416, March 1, 2022)
March 1, 2022	Notice of institution by Commission (87 FR 11467, March 1, 2022)
June 6, 2022	Commission’s vote on adequacy
July 7, 2022	Commerce’s results of its expedited review (87 FR 40502, July 7, 2022)
October 19, 2022	Commission’s determination and views

¹ 19 U.S.C. 1675(c).

² 87 FR 11467, March 1, 2022. In accordance with section 751(c) of the Act, the U.S. Department of Commerce (“Commerce”) published a notice of initiation of a five-year review of the subject antidumping duty order. 87 FR 11416, March 1, 2022. Pertinent Federal Register notices are referenced in app. A, and may be found at the Commission’s website (www.usitc.gov).

³ As part of their response to the notice of institution, interested parties were requested to provide company-specific information. That information is presented in app. B. Summary data compiled in the original investigation are presented in app. C.

⁴ Interested parties were also requested to provide a list of three to five leading purchasers in the U.S. market for the domestic like product and the subject merchandise. Presented in app. D are the responses received from purchaser surveys transmitted to the purchasers identified in this proceeding.

Responses to the Commission’s notice of institution

Individual responses

The Commission received one submission in response to its notice of institution in the subject review. It was filed on behalf of Metallurgical Products Company (“Metallurgical Products”), a domestic producer of phosphor copper (also referred to herein as “domestic interested party”).

A complete response to the Commission’s notice of institution requires that the responding interested party submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy and explain any deficiencies in their responses. A summary of the number of responses and estimates of coverage for each is shown in table I-2.

Table I-2
Phosphor copper: Summary of completed responses to the Commission’s notice of institution

Interested party	Type	Number of firms	Coverage
U.S. producer	Domestic	1	***%

Note: The U.S. producer coverage figure presented is the domestic interested party’s estimate of its share of total U.S. production of phosphor copper during 2021. Domestic interested party’s response to the notice of institution, March 30, 2022, p.17.

Party comments on adequacy

The Commission received party comments on the adequacy of responses to the notice of institution and whether the Commission should conduct an expedited or full review from Metallurgical Products. Metallurgical Products requests that the Commission conduct an expedited review of the antidumping duty order on phosphor copper.⁵

The original investigation

The original investigation resulted from a petition filed on March 9, 2016 with Commerce and the Commission by Metallurgical Products, West Chester, Pennsylvania.⁶ On March 3, 2017, Commerce determined that imports of phosphor copper from Korea were being sold at less than fair value (“LTFV”).⁷ The Commission determined on April 17, 2017 that the

⁵ Domestic interested party’s comments on adequacy, May 13, 2022, p. 3.

⁶ Phosphor Copper from Korea, Inv. No. 731-TA-1314 (Final), USITC Publication 4681, April 2017 (“Original publication”), p. I-1.

⁷ 82 FR 12433, March 3, 2017.

domestic industry was materially injured by reason of LTFV imports of phosphor copper from Korea.⁸ On April 24, 2017, Commerce issued its antidumping duty order with the final weighted-average dumping margin of 8.43 percent.⁹

Previous and related investigations

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

Commerce's five-year review

Commerce announced that it would conduct an expedited review with respect to the order on imports of phosphor copper from South Korea with the intent of issuing the final results of this review based on the facts available not later than June 29, 2022.¹⁰ Commerce publishes its Issues and Decision Memoranda and its final results concurrently, accessible upon publication at <http://enforcement.trade.gov/frn/>. Issues and Decision Memoranda contain complete and up-to-date information regarding the background and history of the order, including scope rulings, duty absorption, changed circumstances reviews, and anticircumvention, as well as any decisions that may have been pending at the issuance of this report. Any foreign producers/exporters that are not currently subject to the antidumping duty order on imports of phosphor copper from South Korea are noted in the sections titled "The original investigation" and "U.S. imports," if applicable.

⁸ 82 FR 18668, April 20, 2017.

⁹ 82 FR 18893, April 24, 2017.

¹⁰ Letter from Alex Villanueva, Senior Director, AD/CVD Operations, Enforcement and Compliance, U.S. Department of Commerce to Nannette Christ, Director of Investigations, April 20, 2022.

The product

Commerce's scope

Commerce has defined the scope as follows:

The merchandise covered by the order is master alloys of copper containing between five percent and 17 percent phosphorus by nominal weight, regardless of form (including but not limited to shot, pellet, waffle, ingot, or nugget), and regardless of size or weight. Subject merchandise consists predominantly of copper (by weight), and may contain other elements, including but not limited to iron (Fe), lead (Pb), or tin (Sn), in small amounts (up to one percent by nominal weight). Phosphor copper is frequently produced to JIS H2501 and ASTM B-644, Alloy 3A standards or higher; however, merchandise covered by the order includes all phosphor copper, regardless of whether the merchandise meets, fails to meet, or exceeds these standards.¹¹

U.S. tariff treatment

Phosphor copper is provided for in Harmonized Tariff Schedule of the United States ("HTS") subheading 7405.00.10, covering certain master alloys of copper.¹² The 2022 general rate of duty is "Free" for HTS subheading 7405.00.10.¹³ Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

¹¹ 82 FR 18893, April 24, 2017.

¹² Phosphides of copper (which includes phosphor copper and out-of-scope products) containing more than 15 percent by weight of phosphorus are provided for in HTS subheading 2853.90.10. The 2022 general rate of duty is 2.6 percent ad valorem for HTS subheading 2853.90.10. Phosphor copper is provided for in Harmonized Tariff Schedule of the United States ("HTS") subheading 7405.00.10, if the phosphorus content is 5 percent or more, but not more than 15 percent by weight, and provided for in HTS subheading 2853.90.10, if the phosphorus content is more than 15 percent by weight. USITC, HTSUS (2022) Revision 2, Publication 5293, February 2022, pp. 28-33, 74-4. The Commission reported in the original investigation that phosphor copper with 15 percent phosphor content by weight accounted for the large majority of U.S. producers' shipments and all U.S. imports from South Korea and nonsubject sources. The highest possible concentration of phosphorus in phosphor copper is 15 percent by weight because that is the maximum solubility of phosphor in copper. Original publication, pp. 5, 13, I-8, II-6, IV-2, and IV-3.

¹³ USITC, HTSUS (2022) Revision 2, Publication 5293, February 2022, pp. 28-33, 74-4.

Description and uses¹⁴

Phosphor copper is composed primarily of copper (Cu) and phosphorus (P), but may contain small amounts of iron, lead, tin, and other elements. Domestic phosphor copper is generally produced to Japanese Industrial Standard (JIS) H2501 (table I-3) and to American Society for Testing and Materials (ASTM) B-644, Alloy 3A standards (table I-4). Phosphor copper is a master alloy, which is not suitable for further working into other products (i.e., it is not “usefully malleable”), but rather is used as an additive in the manufacture of other alloys or as a deoxidizing agent.¹⁵ Phosphor copper has different physical and chemical characteristics than copper. Copper contains either no phosphorus or has phosphorus content of less than 1 percent by weight.

Table I-3
Phosphor copper: Japanese Industrial Standard (JIS) H-2501-1982

Grade	Class	Designation	Chemical composition	Application examples
1	A	15 P Cu A	Must contain a minimum of 14.5 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain maximum impurity levels of 0.05 percent iron, 0.01 percent lead, and 0.01 percent tin.	Principally as a deoxidizer, phosphor additive, etc., to wrought copper and copper alloy materials.
1	B	15 P Cu B	Must contain a minimum of 14.0 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain a maximum impurity level of 0.15 percent iron.	Principally as a deoxidizer, phosphor additive, etc., to copper and copper alloy castings.
2	Not applicable	10 P Cu	Must contain 10.0 to 11.0 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain a maximum impurity level of 0.15 percent iron.	Lower melting point than Grade 1. A deoxidizer, phosphor additive, etc., to wrought materials and castings of copper and copper alloys.
3	Not applicable	8 P Cu	Must contain 8.0 to 9.0 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain a maximum impurity level of 0.15 percent iron.	Microalloying element applications, etc., to high-silicon aluminum alloy castings.

Source: JIS, “H-2501-1982 (Reaffirmed 1993), Phosphor Copper Metal,” Table 1 Grade and Class and Table 2 Chemical Compositions.

¹⁴ Unless otherwise noted, this information is based on Original publication, pp. I-6 – I-8.

¹⁵ USITC, HTSUS (2022) Revision 2, Publication 5293, February 2022, p. 74-1.

Table I-4**Phosphor copper: American Society for Testing and Materials (ASTM) B-644-95 Standards**

Alloy	Composition
3A	Must contain a minimum of 14.0 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain a maximum impurity level of 0.15 percent iron.
3B	Must contain 8.0 to 8.8 percent phosphorus and a combined minimum content of 99.75 percent phosphorus and copper. May contain a maximum impurity level of 0.15 percent iron.

Source: ASTM, "B-644-95, Standard Specification for Copper Alloy Addition Agents," Table 1 Chemical Requirements.

Phosphor copper has three primary uses: (1) as a deoxidizer; (2) as an alloying additive that increases strength, hardness, and elasticity; and (3) in brazing alloys. Used as a deoxidizer, the phosphorus component of the phosphor copper reacts with oxides in the copper alloy that could otherwise weaken the alloy through the process of hydrogen embrittlement. As an alloying additive, phosphor copper improves the workability of the copper and allows, for example, the copper alloy to be drawn into a tube. Brazing is a method of joining pieces of metal. A brazing alloy must have a melting temperature below the melting temperature of the metal pieces being joined and must easily flow to fill the gap between the metal pieces, known as "wetting." The phosphorus in the brazing alloy both lowers the melting temperature and improves the wettability of the alloy. Brazing alloys contain higher levels of phosphorus than other products made using phosphor copper. Phosphor copper is used by copper tube manufacturers, brazing rod manufacturers, brass mills, foundries, and in products that are produced by copper and brass melting.

Phosphor copper, as it is most commonly sold, contains approximately 15 percent phosphorus by weight. Fifteen percent by weight is the highest possible concentration of phosphorus because that is the maximum solubility of phosphor in copper. There is a small market for phosphor copper that is 8 percent phosphorus by weight. The 8 percent phosphorus product is used to manufacture certain aluminum-silicon alloys to improve the strength of those alloys. The melting point of the 8 percent phosphor copper product is lower than for the 15 percent product and closer to the melting temperature of the aluminum alloy. The lower melting temperature of the 8 percent product makes it more useable in that particular aluminum alloy.

Phosphor copper is sold in the form of shot or ingots. Shot consists of small pellets of phosphor copper, typically a few millimeters in diameter. Ingot is often made in a "waffle" casting, which imparts a grid of crossed indentations onto the top surface of the ingot where it

can be easily broken into smaller pieces. Both shot and ingot typically are loaded into steel drums and shipped by truck.

Manufacturing process¹⁶

The raw materials used to make phosphor copper are copper and phosphorus. High-grade refined copper scrap is loaded into an electrical induction furnace and heated until molten. The phosphorus is separately heated to a molten state and then injected into the bottom of the furnace containing the molten copper. The molten phosphorus dissolves into the copper as it bubbles up to the surface. Excess phosphorus that escapes to the surface of the molten alloy reacts with oxygen in the air to form phosphor pentoxide. The phosphor pentoxide is scrubbed from the air using water to form phosphoric acid. The phosphoric acid is concentrated and sold to fertilizer manufacturers. The equipment that handles the phosphoric acid must be acid-resistant and, therefore, be made of stainless steel, which increases its cost.

Once enough phosphorus has been added to reach the 15 percent-by-weight content, the molten alloy is either poured into a water bath to form shot or into molds to form ingots. After the shot or ingots cool, they are packaged into steel drums for storage and shipment. The 8 percent phosphor product is made in a similar way, but with less phosphorus added so the concentration does not exceed 8 percent by weight. The South Korean producer of phosphor copper and other producers throughout the world likely make phosphor copper by this same process.

The industry in the United States

U.S. producers

During the final phase of the original investigation, the Commission received U.S. producer questionnaires from three firms, which accounted for all production of phosphor copper in the United States during 2015.¹⁷

In its response to the Commission's notice of institution in this current review, Metallurgical Products provided a list of two known and currently operating U.S. producers of phosphor copper. One firm providing U.S. industry data in response to the Commission's notice

¹⁶ Unless otherwise noted, this information is based on Original publication, p. I-8.

¹⁷ Original publication, p. III-1.

of institution accounted for approximately *** percent of production of phosphor copper in the United States during 2021.¹⁸

Recent developments

Table I-5 presents events in the U.S. industry since the final phase of the original investigation.¹⁹

Table I-5
Phosphor copper: Recent developments in the U.S. industry

Item	Firm	Event
Acquisition	H. Kramer	Metallurgical Products was acquired by ***, H. Kramer Company ("H. Kramer"), effective January 1, 2021. ***. Further details on the acquisition are not known.

Source: Rijuta Dey Bera, "H Kramer snaps up phosphor Cu maker," January 13, 2021, <https://www.metalbulletin.com/Article/3970503/H-Kramer-snaps-up-phosphor-Cu-maker-Metallurgical-Products.html>, retrieved March 7, 2022. Domestic interested party's response to the notice of institution, March 30, 2022, p. 15, fn. 57; Domestic interested party's supplemental response, April 13, 2022, pp. 2-3.

U.S. producers' trade and financial data

The Commission asked domestic interested parties to provide trade and financial data in their response to the notice of institution in the current five-year review.²⁰ Table I-6 presents a compilation of the trade and financial data submitted from all responding U.S. producers in the original investigation and this current five-year review.

¹⁸ Domestic interested party's response to the notice of institution, March 30, 2022, p. 17.

¹⁹ For recent developments, if any, in tariff treatment, please see "U.S. tariff treatment" section. For other developments reported by U.S. purchasers in their responses, if any, please see appendix D.

²⁰ Individual company trade and financial data are presented in app. B.

Table I-6
Phosphor copper: Trade and financial data submitted by U.S. producers, by period

Quantity in pounds; value in 1,000 dollars; unit value in dollars per pound; ratio is in percent

Item	Measure	2013	2014	2015	2021
Capacity	Quantity	***	***	***	***
Production	Quantity	***	***	***	***
Capacity utilization	Ratio	***	***	***	***
U.S. shipments	Quantity	***	***	***	***
U.S. shipments	Value	***	***	***	***
U.S. shipments	Unit value	***	***	***	***
Net sales	Value	***	***	***	***
COGS	Value	***	***	***	***
COGS to net sales	Ratio	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***
SG&A expenses	Value	***	***	***	***
Operating income or (loss)	Value	***	***	***	***
Operating income or (loss) to net sales	Ratio	***	***	***	***

Source: For the years 2013-15, data are compiled using data submitted in the Commission's original investigation. For the year 2021, data are compiled using data submitted by the domestic interested party. Domestic interested party's response to the notice of institution, March 30, 2022, p. 17, and exh 4.

Note: For a discussion of data coverage, please see "U.S. producers" section.

Definitions of the domestic like product and domestic industry

The domestic like product is defined as the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the subject merchandise. The domestic industry is defined as the U.S. producers as a whole of the domestic like product, or those producers whose collective output of the domestic like product constitutes a major proportion of the total domestic production of the product. Under the related parties provision, the Commission may exclude a U.S. producer from the domestic industry for purposes of its injury determination if "appropriate circumstances" exist.²¹

²¹ Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

In its original determination, the Commission defined a single domestic like product consisting of phosphor copper, coextensive with Commerce's scope and it defined the domestic industry as consisting of all domestic producers of phosphor copper.²²

U.S. imports

U.S. importers

During the final phase of the original investigation, the Commission received U.S. importer questionnaires from four firms, which accounted for all U.S. imports of phosphor copper from South Korea during 2015.²³ Import data presented in the original investigation are based on questionnaire responses.

The Commission did not receive responses from any respondent interested parties in this current review. In its response to the Commission's notice of institution, the domestic interested party indicated that there are no companies in the United States that are currently importing the subject merchandise but provided a list of three firms that were identified in the original investigation as U.S. importers of phosphor copper.²⁴

U.S. imports

Table I-7 presents the quantity, value, and unit value of U.S. imports from South Korea as well as nonsubject sources of U.S. imports.

²² 87 FR 11467, March 1, 2022.

²³ Original publication, p. IV-1.

²⁴ Domestic interested party's response to the notice of institution, March 30, 2022, p. 16.

Table I-7
Phosphor copper: U.S. imports, by source and period

Quantity in pounds; value in 1,000 dollars; unit value in dollars per pound

Source	Measure	2016	2017	2018	2019	2020	2021
South Korea (subject)	Quantity	1,508,771	827,542	277,782	---	---	---
United Kingdom	Quantity	---	---	---	---	---	22,048
India	Quantity	---	---	---	661	661	2,646
Germany	Quantity	---	---	---	---	11,266	---
All other sources	Quantity	31,169	361,540	44,000	---	5,386	110
Nonsubject sources	Quantity	31,169	361,540	44,000	661	17,313	24,804
All import sources	Quantity	1,539,940	1,189,082	321,782	661	17,313	24,804
South Korea (subject)	Value	3,737	2,410	952	---	---	---
United Kingdom	Value	---	---	---	---	---	110
India	Value	---	---	---	6	6	26
Germany	Value	---	---	---	---	77	---
All other sources	Value	22	1,092	143	---	24	7
Nonsubject sources	Value	22	1,092	143	6	107	142
All import sources	Value	3,759	3,502	1,095	6	107	142
South Korea (subject)	Unit value	2.48	2.91	3.43	---	---	---
United Kingdom	Unit value	---	---	---	---	---	4.99
India	Unit value	---	---	---	9.07	9.07	9.71
Germany	Unit value	---	---	---	---	6.87	---
All other sources	Unit value	0.70	3.02	3.25	---	4.38	60.39
Nonsubject sources	Unit value	0.70	3.02	3.25	9.07	6.18	5.74
All import sources	Unit value	2.44	2.95	3.40	9.07	6.18	5.74

Source: Compiled from official Commerce statistics for HTS statistical reporting number 7405.00.1000, accessed April 15, 2022.

Note: Because of rounding, figure may not add to total shown.

Note: Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent. Zeros, null values, and undefined calculations are suppressed and shown as "---".

Apparent U.S. consumption and market shares

Table I-8 presents data on U.S. producers' U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

Table I-8
Phosphor copper: Apparent U.S. consumption and market shares, by source and period

Quantity in pounds; value in 1,000 dollars; shares in percent

Source	Measure	2013	2014	2015	2021
U.S. producers	Quantity	***	***	***	***
South Korea	Quantity	***	***	***	---
Nonsubject sources	Quantity	***	***	***	24,804
All import sources	Quantity	***	***	***	24,804
Apparent U.S. consumption	Quantity	***	***	***	***
U.S. producers	Value	***	***	***	***
South Korea	Value	***	***	***	---
Nonsubject sources	Value	***	***	***	142
All import sources	Value	***	***	***	142
Apparent U.S. consumption	Value	***	***	***	***
U.S. producers	Share of quantity	***	***	***	***
South Korea	Share of quantity	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***
All import sources	Share of quantity	***	***	***	***
U.S. producers	Share of value	***	***	***	***
South Korea	Share of value	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***
All import sources	Share of value	***	***	***	***

Source: For the years 2013-15, data are compiled using questionnaire data submitted in the Commission's original investigation and apparent U.S. consumption is derived from U.S. shipments of imports. For the year 2021, U.S. producers' U.S. shipments are compiled from the domestic interested party's response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS statistical reporting number 7405.00.1000, accessed April 15, 2022.

Note: Share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent.

Note: Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent. Zeros, null values, and undefined calculations are suppressed and shown as "---".

Note: For a discussion of data coverage, please see "U.S. producers" and "U.S. importers" sections.

The industry in South Korea

During the final phase of the original investigation, the Commission received foreign producer/exporter questionnaires from one firm, which accounted for all known production of phosphor copper in South Korea and all phosphor copper exports from South Korea to the United States during 2015.²⁵

Although the Commission did not receive responses from any respondent interested party in this five-year review, the domestic interested party identified only one known producer of phosphor copper in South Korea.²⁶

There were no major developments in the South Korean industry since the imposition of the order identified by the domestic interested party in the proceeding.

Table I-9 presents export data for master alloys of copper, a category that includes phosphor copper and out-of-scope products, from South Korea (by export destination in descending order of quantity for 2021).

Table I-9
Master alloys of copper: Quantity of exports from South Korea, by destination and period

Quantity in pounds

Destination market	2016	2017	2018	2019	2020	2021
Turkey	529,109	520,290	397,383	442,026	642,096	897,942
Taiwan	467,379	558,430	640,442	769,412	631,072	832,244
Japan	1,272,324	1,152,353	983,376	1,121,023	894,745	829,819
Greece	176,370	88,185	88,185	352,739	308,647	485,016
Brazil	284,396	396,280	407,304	415,020	434,310	485,016
United Kingdom	308,647	443,129	529,109	485,016	308,647	467,379
India	19,842	16,535	60,274	218,257	180,779	375,888
Thailand	127,363	158,882	174,480	146,825	149,181	338,793
Italy	--	44,092	--	44,092	220,462	330,693
Vietnam	640	88,709	376,307	278,399	440,538	273,474
All other markets	2,427,900	1,249,190	713,002	475,773	574,787	923,960
All markets	5,613,970	4,716,075	4,369,862	4,748,582	4,785,264	6,240,224

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 7405.00, accessed April 25, 2022. These data may be overstated as HS subheading 7405.00 may contain products outside the scope of this review.

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

²⁵ Original publication, p. VII-2.

²⁶ Domestic interested party's response to the notice of institution, March 30, 2022, p. 16.

Third-country trade actions

Based on available information, phosphor copper from South Korea has not been subject to other antidumping or countervailing duty investigations outside the United States.

The global market

Table I-10 presents global export data for master alloys of copper, a category that includes phosphor copper and out-of-scope products (by source in descending order of quantity for 2020).

Table I-10
Master alloys of copper: Quantity of global exports by country and period

Quantity in pounds

Exporting country	2016	2017	2018	2019	2020
Zambia	--	--	23,733,073	--	36,273,775
Belgium	27,014,180	28,988,424	31,592,431	29,698,502	25,401,712
United Kingdom	11,353,874	11,716,230	12,658,709	11,661,103	13,151,133
South Korea	5,613,970	4,716,075	4,369,862	4,748,582	4,785,264
United States	4,899,452	5,942,474	6,850,856	4,724,591	4,423,087
Germany	1,798,474	2,011,817	2,161,776	1,971,709	2,259,603
Kazakhstan	2,960,319	2,530,575	2,762,154	2,549,656	2,140,906
Italy	1,054,428	1,033,458	1,279,826	1,997,225	1,296,561
South Africa	1,193,579	1,909,276	3,279,853	2,161,704	1,229,595
India	1,102,239	1,208,063	1,830,544	1,737,088	997,943
All other exporters	47,439,850	23,655,212	4,303,591	10,262,524	6,059,513
All exporters	104,430,365	83,711,604	94,822,675	71,512,684	98,019,092

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 7405.00, accessed April 25, 2022. These data may be overstated as HS subheading 7405.00 may contain products outside the scope of this review.

Note: Because of rounding, figures may not add to total shown. Global export data for 2021 is not yet available.

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
87 FR 11467 March 1, 2022	<i>Phosphor Copper From Korea; Institution of a Five-Year Review</i>	https://www.govinfo.gov/content/pkg/FR-2022-03-01/pdf/2022-04208.pdf
87 FR 11416 March 1, 2022	<i>Initiation of Five-Year (Sunset) Reviews</i>	https://www.govinfo.gov/content/pkg/FR-2022-03-01/pdf/2022-04283.pdf

APPENDIX B
COMPANY-SPECIFIC DATA

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APPENDIX C
SUMMARY DATA

Table C-1
Phosphor copper: Summary data concerning the U.S. market, 2013-15, January to September 2015,
and January to September 2016

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APPENDIX D

PURCHASER QUESTIONNAIRE RESPONSES

As part of their response to the notice of institution, interested parties were asked to provide a list of three to five leading purchasers in the U.S. market for the domestic like product. A response was received from the domestic interested party and it named the following five firms as top purchasers of phosphor copper: ***. Purchaser questionnaires were sent to these five firms and four firms (***) provided responses, which are presented below.

1. Have there been any significant changes in the supply and demand conditions for phosphor copper that have occurred in the United States or in the market for phosphor copper in South Korea since January 1, 2016?

Purchaser	Yes / No	Changes that have occurred
***	***	***
***	***	***
***	***	***
***	***	***

2. Do you anticipate any significant changes in the supply and demand conditions for phosphor copper in the United States or in the market for phosphor copper in South Korea within a reasonably foreseeable time?

Purchaser	Yes / No	Anticipated changes
***	***	*** .
***	***	*** .
***	***	*** .
***	***	*** .

