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**Business Proprietary Information Removed From Pages iii, iv, 3-4, 8-12, 20, 23, 24, 26, 28, 33, 35-38, 41-43, 45 And From Exhibits I-4 – I-7, I-15 – I-17, I-20, I-21, I-25, I-28 – I-31 Of This Volume.**

**BEFORE THE  
INTERNATIONAL TRADE ADMINISTRATION  
UNITED STATES DEPARTMENT OF COMMERCE  
AND THE  
UNITED STATES INTERNATIONAL TRADE COMMISSION**

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**In the Matter of** )  
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**CERTAIN EPOXY RESINS FROM** )  
**CHINA, INDIA, SOUTH KOREA,** )  
**TAIWAN, AND THAILAND** )  
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**PETITIONS FOR THE IMPOSITION  
OF ANTIDUMPING AND  
COUNTERVAILING DUTIES**

**VOLUME I: GENERAL ISSUES  
AND INJURY**

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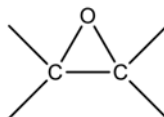
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**PETITIONS FOR THE IMPOSITION OF ANTIDUMPING AND COUNTERVAILING  
DUTIES ON IMPORTS OF CERTAIN EPOXY RESINS FROM CHINA, INDIA, SOUTH  
KOREA, TAIWAN, AND THAILAND**

**VOLUME I: GENERAL ISSUES AND INJURY**

**I. INTRODUCTION**

These petitions are filed by the U.S. Epoxy Resin Producers *Ad Hoc* Coalition (hereinafter the “Coalition” or “Petitioner”) on behalf of the U.S. industry producing epoxy resins covered by these investigations.<sup>1</sup> These investigations cover epoxy resins, which are certain polymers or prepolymers containing epoxy groups.<sup>2</sup> An epoxy group is a unique functional group found in many organic compounds, which involves two carbons and oxygen forming a three-membered ring structure, as shown below.<sup>3</sup> For purposes of this volume, we will refer to the subject product as “epoxy resins.”<sup>4</sup>



These cases involve imports of epoxy resins from China, India, South Korea, Taiwan, and Thailand. As we will show throughout these petitions, unfairly traded imports from these countries have caused material injury to domestic producers, meaning that trade relief is

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<sup>1</sup> For the full scope of these investigations, *see* pp. 14-15 of this volume.

<sup>2</sup> Epoxy groups are also called oxirane or ethylene oxide.

<sup>3</sup> “Epoxide Functional Group webpage”, *ChemTalk*, available at <https://chemistrytalk.org/epoxide-functional-group/#:~:text=What%20is%20an%20Epoxide%3F,tend%20to%20have%20little%20stability> (last visited March 28, 2024), provided as **Exhibit I-1**. Please note that there is no universal agreement on the nomenclature of the three-membered epoxy ring; Europeans generally prefer the term “epoxide,” and North Americans normally use the term “epoxy.” Henry Lee and Kris Neville, *Handbook of Epoxy Resins* (1967).

<sup>4</sup> The term “epoxy resin” is applied to both the polymers or prepolymers and to the cured resins. In the cured resins, all of the reactive groups have reacted, so that they no longer contain epoxy groups. B. Ellis, *Chemistry and Technology of Epoxy Resins*, Springer-Science + Business Media Dordrecht (1993) at 1. These petitions cover uncured epoxy resins, as explained in pages 14-15. More details regarding the process of curing is provided on page 7 of this volume.

appropriate. Before discussing the technical issues of this case, however, a brief overview of the reasons behind this filing is appropriate.

The term “resin” refers to natural or synthetic organic compounds consisting of a non-crystalline or viscous liquid substance.<sup>5</sup> Natural resin is secreted by plants, but in modern industry, natural resins have been almost entirely replaced by synthetic resins.<sup>6</sup> There are two classes of synthetic resins: thermoplastic resins, which remain plastic after heat treatment, and thermosetting resins, which become insoluble and infusible on heating.<sup>7</sup> Epoxy resins are a class of thermosetting resins that, when reacted with hardeners or curing agents, form a strong, durable substance used in a vast array of important commercial and industrial applications.<sup>8</sup> Epoxy resins are critical to the U.S. economy for many reasons:

- Epoxy resins used in composite systems are critical, strategic raw materials to enable lightweighting in automotive, aerospace, and defense industries.<sup>9</sup>
- Epoxy resins are used in advanced electronics applications and are critical for the reshoring of the electronics industry.<sup>10</sup>
- Epoxy resins used in building and construction applications can help increase the lifespan of buildings by improving the durability of the structural parts and flooring.<sup>11</sup>
- Epoxy resins coating are widely recognized as the best way to avoid rust in bridges, water tanks, ships etc.<sup>12</sup>

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<sup>5</sup> “Resin”, *Britannica*, available at <https://britannica.com/science/resin> (last visited March 26, 2024), provided as **Exhibit I-2**.

<sup>6</sup> *Id.*

<sup>7</sup> *Id.* “Infusible” means incapable of being fused or melted.

<sup>8</sup> “Epoxy Resins”, *Chemical Safety Facts*, available at <https://chemicalsafetyfacts.org/chemicals/epoxy-resins/> (last visited March 26, 2024), provided as **Exhibit I-3**.

<sup>9</sup> [ ] at 9, provided as **Exhibit I-7**.

<sup>10</sup> *Id.* at 40-41.

<sup>11</sup> “Epoxy Resins”, *Chemical Safety Facts*, available at <https://chemicalsafetyfacts.org/chemicals/epoxy-resins/> (last visited March 26, 2024), provided as **Exhibit I-3**.

<sup>12</sup> “‘Rust: The Longest War,’ by Jonathan Waldman”, *The New York Times*, available at <https://www.nytimes.com/2015/04/19/books/review/rust-the-longest-war-by-jonathan-waldman.html> (last visited April 1, 2024), provided as **Exhibit I-32**.

- Epoxy resins provide a protective layer that separates food and drinks from the metal used to make their cans.<sup>13</sup>
- Renewable energy sources depend on epoxy technology innovations to help them become more efficient, affordable, and scalable.<sup>14</sup>
- Epoxy resins can help provide adhesion to metal and resistance to rust and corrosion on the bodies of vehicles and other metal parts.<sup>15</sup>

These are just a few examples of the many benefits of epoxy resins – they have numerous other applications. Petitioner estimates that in 2023, the total net sales value of domestically-produced epoxy resins covered by these petitions was [ ]<sup>16</sup> In short, epoxy resins constitute a vital domestic industry.

For many years, U.S. producers of epoxy resins have been global leaders. As recently as 2021, the two petitioning companies in these investigation – Olin Corporation and Westlake Epoxy Inc. – had a combined operating income of [ ]<sup>17</sup> and held [ ] of the U.S. market.<sup>18</sup> In recent years, however, global markets for epoxy resins – including the U.S. market – have been increasingly distorted by unfair market practices, particularly in Asia, and those practices are now causing material injury to domestic producers.

Here is what happened: most epoxy resins are made through a reaction between epichlorohydrin (“ECH”) and bisphenol A (“BPA”). Thanks to help from government support and other market distortions, China has ramped up substantial additional capacity for ECH. From 2019 to 2023, China’s ECH export volume increased gradually with a five-year compound annual growth rate of [ ] percent, reaching almost [ ] metric tons in 2023.<sup>19</sup> China not

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<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> **Exhibit I-4** (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>17</sup> **Exhibit I-5** (Petitioner’s Trade and Financial Data).

<sup>18</sup> **Exhibit I-4** (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>19</sup> [ ]  
at 24, provided as **Exhibit I-6**. ]



only used this ECH to make increased volumes of epoxy resins for export – it also became a major supplier of ECH to producers in the other subject countries.<sup>20</sup> As a result of these developments, producers in all five subject countries increased their production of epoxy resins – and began dumping those products into the United States and other markets. Furthermore, producers in four of the subject countries – China, India, South Korea, and Taiwan – received significant government subsidies to make and export the subject product. Of course, those subsidies have exacerbated the flood of subject imports into the U.S. market.

After several years of facing dumped and subsidized imports, the petitioning companies have undoubtedly suffered material injury by reason of unfair trade. Between 2021 and 2023, their capacity utilization fell by [ ] percentage points, their share of the U.S. market fell by [ ] percentage points, their operating income fell by [ ], the ratio of their operating income to their net sales fell by [ ] percentage points.<sup>21</sup> Meanwhile, the subject producers continue to increase their capacity and production – meaning that in the absence of trade relief, domestic producers will undoubtedly suffer further harm.

Under these circumstances, the producers of epoxy resins in the United States have been forced to seek trade relief. [

] Given the facts shown throughout these petitions, trade relief is vital not only to the survival of the domestic producers and the welfare of their employees and the communities in which they work, but also to ensuring that the U.S. economy does not become

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<sup>20</sup> *Id.*

<sup>21</sup> Exhibit I-5 (Petitioner’s Trade and Financial Data).

wholly dependent on unfairly traded imports from countries that have engaged in a cynical and government-directed effort to expand their market share at the expense of American companies and workers. U.S. trade laws are designed to stop precisely the type of behavior shown by subject producers.

The petitions seek the imposition of antidumping duties on imports of epoxy resins from China, India, South Korea, Taiwan, and Thailand, pursuant to Section 731 of the Tariff Act of 1930, as amended (the “Act”), *codified at* 19 U.S.C. § 1673. Volumes II through VI of these petitions present evidence that imports of epoxy resins from each subject country are being sold in the United States at less than fair value. The petitions also seek the imposition of countervailing duties on U.S. imports of epoxy resins from China, India, South Korea, and Taiwan, pursuant to Section 701 of the Act, *codified at* 19 U.S.C. § 1671. Volumes VII through X present evidence that imports of epoxy resins from these subject countries benefit from countervailable subsidies.

The remainder of this volume contains general information relating to the antidumping and countervailing duty petitions, as well as information that is required concerning material injury and threat of material injury to the domestic industry. The allegations contained in these petitions consist of information that is reasonably available to the Petitioner. The petitions are being filed in conformity with the requirements of Section 351.202 of the regulations of the U.S. Department of Commerce (“the Department”)<sup>22</sup> and Section 207.11 of the regulations of the U.S. International Trade Commission (“Commission”).<sup>23</sup>

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<sup>22</sup> See generally 19 C.F.R. § 351.202.

<sup>23</sup> See generally 19 C.F.R. § 207.11(b)(2)(i).

## II. GENERAL INFORMATION

### A. The Petitioner And The Degree Of Industry Support For The Petitions

#### 1. The Petitioner<sup>24</sup>

The petitioning Coalition – the U.S. Epoxy Resin Producers *Ad Hoc* Coalition – consists of the two U.S. producers of epoxy resins. These producers are interested parties within the meaning of 19 U.S.C. § 1677(9)(C),<sup>25</sup> and the Coalition is an interested party within the meaning of 19 U.S.C. § 1677(9)(F).<sup>26</sup> The two members of the Coalition are: (1) Olin Corporation (“Olin”) and (2) Westlake Corporation (“Westlake”). Contact information for each member is provided below:

#### **Olin Corporation**

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Contact Email: [avanderkaay@westlake.com](mailto:avanderkaay@westlake.com)

Website: <https://westlake.com/>

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<sup>24</sup> See 19 C.F.R. § 207.11(b)(2)(i) and 19 C.F.R. § 351.202(b)(1).

<sup>25</sup> This provision defines “interested party” to include “a manufacturer, producer, or wholesaler in the United States of a domestic like product.”

<sup>26</sup> This provision defines “interested party” to include “an association, a majority of whose members is composed of interested parties” described in subparagraph (C) with respect to a domestic like product.

## 2. Industry support for the petitions<sup>27</sup>

The Department will determine that the petitions have sufficient industry support if the following criteria are met: (1) the domestic producers or workers who support the petition account for at least 25 percent of the total production of the domestic like product; and (2) the domestic producers or workers who support the petition account for more than 50 percent of the production of the domestic like product made by that portion of the industry expressing support for or opposition to the petition.<sup>28</sup>

In these investigations, the petitioning companies account for 100 percent of U.S. production of epoxy resins. Thus, they satisfy both industry support requirements under the statute.

### B. Related Proceedings And Previous Requests For Relief<sup>29</sup>

Neither the Petitioner nor either company in the petitioning coalition has previously filed for antidumping or countervailing duty relief under Sections 701 and 731 of the Act. Furthermore, the petitioning parties have not previously filed for trade relief from imports pursuant to Section 337 of the Act, Sections 201 or Section 301 of the Trade Act of 1974, as amended, or Section 232 of the Trade Expansion Act of 1962.

In April 2018, the U.S. Trade Representative (“USTR”) determined that acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation were unreasonable or discriminatory and burden or restrict U.S. commerce.<sup>30</sup> In response to these acts, policies, and practices, USTR used its authority under Section 301 to

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<sup>27</sup> See 19 C.F.R. § 351.202(b)(3). 19 C.F.R. § 351.202(b)(3)(i) asks for “the total volume and value of U.S. production of the domestic like product.” For confidential data regarding the Petitioner’s operations related to epoxy resin production, see Exhibit I-5.

<sup>28</sup> See 19 U.S.C. § 1673a(c)(4)(A).

<sup>29</sup> See 19 C.F.R. § 351.202(b)(4).

<sup>30</sup> See *Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 14906 (USTR Apr. 6, 2018).

impose additional duties on several products from China.<sup>31</sup> On August 23, 2018, epoxy resin imports became subject to an additional 25 percent *ad valorem* Section 301 duty.<sup>32</sup> These duties remain in place today.

### C. Description Of The Subject Merchandise

Below, Petitioner provides a detailed description of the subject merchandise that defines the requested scope of the investigation, including the technical characteristics and uses of the merchandise and its current U.S. tariff classification number.<sup>33</sup>

#### 1. Technical characteristics and uses

Epoxy resins are a diverse class of prepolymers and polymers featuring epoxy groups. As thermosetting resins, epoxy resins do not develop useful properties until they are “cured,” that is, they have reacted with curing agents.<sup>34</sup> During the curing process, a liquid or fluid mixture (which includes epoxy resins and other chemicals known as “hardeners”) is converted to a solid that is chemically inactive. Curing may be accomplished at specific temperatures or may require application of external heat or ultraviolet light.<sup>35</sup> For more detail on this point, see Exhibit I-7.<sup>36</sup>

Hundreds of chemicals, or agents, can be used in the curing process.<sup>37</sup> This fact allows end-users to choose from among a wide variety of desired performance characteristics, while

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<sup>31</sup> See *Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation* 83 Fed. Reg. 28710 (USTR Jun. 20, 2018); *Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 40823 (USTR Aug. 16, 2018); *Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 47974 (USTR Sept. 21, 2018).

<sup>32</sup> See *Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 40823 (USTR Aug. 16, 2018).

<sup>33</sup> 19 C.F.R. § 351.202(b)(5).

<sup>34</sup> [ ] at 8, provided as **Exhibit I-7**. Curing agents can also be called curatives, hardeners, or cross-linking agents.

<sup>35</sup> [ ] at 99, provided as Exhibit I-7.

<sup>36</sup> [ ] at 99, provided as Exhibit I-7.

<sup>37</sup> [ ] at 99, provided as Exhibit I-7.

also considering cost, processing method, curing conditions, environmental limitations, and the mechanical, chemical, electrical, and thermal properties desired in the cured resin.<sup>38</sup>

In their cured form, epoxy resins possess the following properties: great adhesion, excellent resistance to corrosion and chemicals, high mechanical strength, excellent properties for insulation applications.<sup>39</sup> The leading applications for epoxy resins are the following.<sup>40</sup>

- *Coatings*: Protective coatings have traditionally been the largest market for epoxy resins, accounting for around half of total consumption. The major coating markets for this applications include powder coatings, industrial maintenance and marine finishes, original equipment manufacturer (“OEM”) automotive primers, beer, beverage, and food can interiors, machinery and equipment, and appliances. Epoxy surface coatings are among the more widely used industrial coatings.<sup>41</sup>
- *Construction*: Epoxy resins are used in flooring, paving, and construction, primarily in industrial and commercial flooring applications. Epoxy flooring products include floor coatings, self-leveling floors, trowelable floors, and pebble-finished floors, which are used in production and assembly areas, clean rooms, machine shops, control rooms, laboratories, and meat-preparation areas.<sup>42</sup>
- *Composites*: A composite is created when continuous, chopped, or woven fibers are embedded in a resin matrix. Epoxy-based composites are made from liquid epoxy resins and reinforcing glass, carbon, or aramid fibers.<sup>43</sup> Composites made with epoxies have been used for several years in military and space applications. Composites are also used in wind turbine blades, automotive and aerospace parts, pipes, tanks, snow skis, tennis racquets, fishing rods, surfboards, and golf club shafts.<sup>44</sup>
- *Electrical and electronics laminates*: Epoxy resins are used as an embedding compound to enclose, encapsulate, or seal a device in a protective matrix.<sup>45</sup>

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<sup>38</sup> [ ] at 99, provided as Exhibit I-7.

<sup>39</sup> [ ] at 12, provided as Exhibit I-7.

<sup>40</sup> [ ] at 9, provided as Exhibit I-7.

<sup>41</sup> [ ] at 26, provided as Exhibit I-7.

<sup>42</sup> [ ] at 30, provided as Exhibit I-7.

<sup>43</sup> Aramids are man-made fibers with enhanced structural properties, known for their high tensile strength and mechanical properties. “Aramid fibers”, *Science Direct*, available at <https://www.sciencedirect.com/topics/materials-science/aramid-fiber> (last visited March 28, 2024), provided as

**Exhibit I-8.**

<sup>44</sup> [ ] at 33-36, provided as Exhibit I-7.

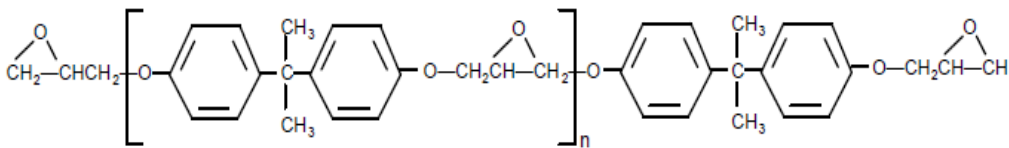
<sup>45</sup> [ ] at 40-42, provided as Exhibit I-7.

Normally, brominated epoxy resins<sup>46</sup> are used in the manufacture of printed circuit boards because of its flame-retardant properties.

- *Adhesives:* Epoxy resin adhesives are among the most widely used structural adhesives, noted especially for their excellent adhesion to a variety of materials.<sup>47</sup> These are used in greater quantities in automotive assembly operations to bond dissimilar materials (*e.g.*, steel, plastics, and aluminum), which are difficult to bond with mechanical fasteners.<sup>48</sup> Adhesives are also used in the aerospace segment.

Epoxy resins have a variety of different chemical compositions. The most common epoxy resin is bisphenol A diglycidyl ether, also known as BADGE or DGEBA,<sup>49</sup> which is formed by reacting ECH with BPA.

The general structure of BADGE-type epoxy resin is as follows.<sup>50</sup>



The reaction of BPA and ECH creates BADGE-type epoxy resins in liquid form. This product can be further reacted with more BPA, in the presence of a catalyst, to become a solid epoxy resin, which has a higher molecular weight than the liquid epoxy resin.<sup>51</sup> BADGE-type resins and similar resins with higher molecular weights are known as “conventional” epoxy resins. This category accounts for around 80 to 85 percent of the world consumption of epoxy resins.<sup>52</sup>

<sup>46</sup> The term “brominated” means that the resin has been treated or caused to combine with bromine or a compound of bromine.

<sup>47</sup> [ ] at 28, provided as Exhibit I-7.

<sup>48</sup> [ ] at 9, provided as Exhibit I-7.

<sup>49</sup> The Chemical Abstracts Service registry number for BADGE is CAS 1675-54-3.

<sup>50</sup> B. Ellis, *Chemistry and Technology of Epoxy Resins*, Springer-Science + Business Media Dordrecht (1993), at 3.

<sup>51</sup> [ ] at 16, provided as Exhibit I-7.

<sup>52</sup> [ ] at 12, provided as Exhibit I-7.

Four other types of basic epoxy resins account for around 10 to 15 percent of global consumption of epoxy resins:<sup>53</sup>

- ***Brominated resins*** are ignition-resistant compounds that are designed for applications requiring a high degree of flammability resistance.<sup>54</sup>
- ***Novolac resins*** are used in electrical laminates and encapsulations, moldings and castings and reinforced plastics requiring high chemical resistance.<sup>55</sup>
- ***Cycloaliphatic resins*** feature lower viscosities, higher heat-distortion temperatures, lower conductivity, and excellent resistance to weather exposure. These resins are particularly useful for electrical applications and for composites.<sup>56</sup>
- ***Waterborne resins*** use water, as opposed to solvent or other chemicals, to lower viscosity and improve application properties. These resins are useful in structural applications or as coatings.

Other types of epoxy resins are used mostly as additives in various coatings and plastics.

Together these epoxy resins are believed to make up, at most, five percent of the epoxy market.<sup>57</sup>

Here are some examples:

- ***Multifunctional epoxies*** are used to produce advanced composites, adhesives, and electronic encapsulations.<sup>58</sup>
- ***Aliphatic epoxies*** are mostly used as reactive diluents to modify viscosity, as flexibilizing agents to increase elongation and impact resistance, or as plasticizers and stabilizers for vinyl resins.<sup>59</sup>
- ***Glycidyl amines*** are used as additives in conventional epoxy resins to increase cure rates and raise glass transition temperatures. They may also be used in carbon-fiber reinforced composites for the aerospace industry.<sup>60</sup>

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<sup>53</sup> [ ] at 12-13, provided as Exhibit I-7.

<sup>54</sup> [ ] at 12-13, provided as Exhibit I-7.

<sup>55</sup> [ ] at 12-13, provided as Exhibit I-7.

<sup>56</sup> [ ] at 12-13, provided as Exhibit I-7.

<sup>57</sup> [ ] at 13, provided as Exhibit I-7.

<sup>58</sup> [ ] at 13, provided as Exhibit I-7. Electronic encapsulation is a process that protects electrical components from the environment. See “What is electronic encapsulation”, *Geospace*, available at <https://geospacemfg.com/blog/what-is-electronic-encapsulation> (last visited March 25, 2024), provided as **Exhibit I-9**.

<sup>59</sup> [ ] at 13, provided as Exhibit I-7.

<sup>60</sup> [ ] at 13, provided as Exhibit I-7.



- *Glycidyl imides* are used extensively as curing agents for polyesters powder coatings.<sup>61</sup>
- *Glycidyl esters* are used as agents to increase flexibility in other epoxy resins.<sup>62</sup>

Epoxy resins are sold in the form of liquids, semisolids, solids, and solutions. These products can be made in a wide variety of molecular weights. As the molecular weight increases, the viscosity of the resin also increases. Depending on the application, most epoxy resin formulations require the use of modifiers to control viscosity, as well as other properties.<sup>63</sup>

## 2. Manufacturing process

As described above, BADGE-type epoxy resins account for 80-85 percent of world consumption of epoxy resins.<sup>64</sup> The manufacturing process for BADGE-type epoxy resins is summarized below:

**Reaction of epichlorohydrin (ECH) and bisphenol-A (BPA):** First, ECH and BPA are infused into a reactor. These are melted and undergo the first stage reaction, which takes place at a constant temperature. In this first stage reaction, the epoxy radical<sup>65</sup> is separated from the ECH to be attached to a hydroxyl radical<sup>66</sup> from the BPA, thus producing chlorohydrin ether.

**Reaction with caustic soda:** Second, a solution of 20-40 percent caustic soda is added to the reaction vessel as the chlorohydrin ether solution is brought to the boiling point. This

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<sup>61</sup> [ ] at 13, provided as Exhibit I-7.

<sup>62</sup> [ ] at 13, provided as Exhibit I-7.

<sup>63</sup> [ ] at 14, provided as Exhibit I-7.

<sup>64</sup> [ ] at 12-13, provided as Exhibit I-7.

<sup>65</sup> A radical, also known as a free radical, is an atom, molecule, or ion that has at least one unpaired valence electron. These unpaired electrons make radicals highly chemically reactive. See “18.1. What is a free radical?”, *Organic Chemistry II*, available at <https://courses.lumenlearning.com/suny-potsdam-organicchemistry2/chapter/18-1-what-is-a-free-radical/> (last visited March 28, 2024), provided as **Exhibit I-10**.

<sup>66</sup> Hydroxyl Radical is a monovalent radical consisting of one hydrogen and oxygen atom found in bases, carboxylic acids, and alcohols. See “Hydroxyl Radical”, *Science Direct*, available at [https://www.sciencedirect.com/topics/earth-and-planetary-sciences/hydroxyl-radical#:~:text=The%20hydroxyl%20radical%20\(OH\)%20is%20an%20important%20chemical%20species%20throughout,key%20catalyst%20of%20ozone%20destruction](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/hydroxyl-radical#:~:text=The%20hydroxyl%20radical%20(OH)%20is%20an%20important%20chemical%20species%20throughout,key%20catalyst%20of%20ozone%20destruction) (last visited March 28, 2024), provided as **Exhibit I-11**.

addition causes a dechlorination reaction to occur, thus producing a terminal epoxy radical.<sup>67</sup> The monoglycidil ether BPA produced as a result continues to react with BPA and ECH and gradually forms a polymer.

**Evaporation:** After the polymer is produced, it is transferred through a storage tank to the ECH separation evaporator, where the ECH evaporates under a vacuum.

**Separation:** After the evaporation of unreacted ECH, the two phases are separated by adding an inert solvent, which is used to eliminate sodium chloride and the reaction by-product by the difference in specific gravity. The polymer with adjusted acidity is evaporated under vacuum to eliminate the solvent, thus obtaining epoxy product.

**Washing:** The resin is then washed with water.

A flowchart illustrating this process is included in **Exhibit I-33**. The chemical reaction used to manufacture the BADGE-type epoxy resin is illustrated in **Exhibit I-34**.<sup>68</sup>

When making epoxy resins other than BADGE-type epoxy resins, the manufacturing process may be modified. Potential modifications include:

- Using different raw materials, such as bisphenol F or Hydrogenated Bisphenol A (“HBPA”);
- Including a co-solvent (*e.g.*, isopropyl alcohol, methanol) together with the ECH;
- Using an extra catalyst (*e.g.*, Tetramethylammonium chloride);
- Using specific additives to achieve desired properties (*e.g.*, flexibility, viscosity, color, adhesiveness, and faster curing).

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<sup>67</sup> “Terminal” in chemistry refers to the end of a polymer molecule and a point at which electron connections can easily be made or broken. See “Terminal”, *Chemistry Glossary*, available at <https://glossary.periodni.com/glossary.php?en=terminal> (last visited March 28, 2024), provided as **Exhibit I-12**. “Terminal epoxy radical” means the end of a polymer molecule containing an epoxy group with at least one unpaired valence electron.

<sup>68</sup> B. Ellis, *Chemistry and Technology of Epoxy Resins*, Springer-Science + Business Media Dordrecht (1993), at 3.

### 3. U.S. tariff classification numbers

Epoxy resins are classifiable in the Harmonized Tariff Schedule of the United States (“HTSUS”) under number 3907.30.0000.<sup>69</sup> The General Duty rate under HTSUS number 3907.30.0000 is 6.1 percent.<sup>70</sup> The petitioning companies believe that most of the imports classified under 3907.30.0000 are epoxy resins, but this HTSUS number can also include certain items that are excluded from the scope. As shown in the scope of these investigations, epoxy resins may also enter the U.S. market through other HTSUS codes. As discussed in the next section, the coverage of these petitions is determined by the written description of the scope of the investigations, not the HTSUS number.

### 4. Requested scope of the investigations

The following language describes the imported merchandise that Petitioner intends to be included in the scope of these investigations:

The merchandise subject to these petitions are epoxy resins, also known as epoxide resins or polyepoxides, which are polymers or prepolymers containing epoxy groups. Epoxy resins range in physical form from low viscosity liquids to solids and are used in a wide range of applications such as coatings, paints, adhesives, composite materials, wind blade systems, insulating materials, civil engineering materials, and electronics. All epoxy resins are covered by the scope of these petitions irrespective of physical form, viscosity, grade, purity, molecular weight, or molecular structure and regardless of packaging.

Epoxy resins may contain modifiers or additives, such as hardeners, curatives, colorants, pigments, diluents, solvents, thickeners, fillers, plasticizers, softeners, flame retardants, toughening agents, catalysts, Bisphenol F, and ultraviolet light inhibitors, so long as the modifier or additive has not chemically reacted so as to cure the epoxy resin or convert it into a different product no longer containing epoxy groups. Such epoxy resins with modifiers or additives are included in the scope where the epoxy resin component comprises at least 30 percent of the total weight of

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<sup>69</sup> Chapter 39 of the HTSUS covers “Plastics and Articles Thereof,” and HTSUS number 3907.30.0000 covers “Epoxide resins.” See Chapter 39 of the HTSUS at 9, attached as **Exhibit I-13**.

<sup>70</sup> See Relevant pages from HTSUS Chapter 39, attached as Exhibit I-13.

the product. The scope also includes blends of epoxy resins with different types of epoxy resins, with or without the inclusion of modifiers and additives, so long as the combined epoxy resin component comprises at least 30 percent of the total weight of the blend.

Epoxy resins are characterized by the presence of reactive epoxy groups that allow them to be readily cross-linked at the time of use. Epoxy resins may be reacted (cross-linked) either with themselves or with a wide range of co-reactants, often referred to as hardeners, curatives, or curing agents. The cross-linking reaction is commonly referred to as curing. The epoxy resins and blends thereof covered by this scope have not been cured.

Epoxy resins that enter as part of a system or kit with separately packaged co-reactants, such as hardeners or curing agents, are within the scope. For such entries, both the epoxy resin and the co-reactant are covered by the scope of these petitions when entered together.

The scope includes merchandise matching the above description that has been processed in a third country, including by commingling, diluting, introducing, or removing modifiers or additives, or performing any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the subject country.

The scope also includes epoxy resin that is commingled with epoxy resin from sources not subject to this investigation. Only the subject component of such commingled products is covered by the scope of this investigations.

Excluded from the scope are phenoxy resins, which are polymers weighing more than 11,000 Daltons and containing no epoxy groups other than at the terminal ends of the molecule. Phenoxy resins' Melt Flow Index ("MFI") at 200°C (392°F) range from 4 to 70 grams per 10 min and its Glass-Transition Temperatures ("Tg") range from 80 to 100°C (176 to 212°F).

Excluded from the scope are certain paint and coating products, which are blends, mixtures, or other formulations of epoxy resin, curing agent, and pigment, in any form, packaged in one or more containers, wherein (1) the pigment represents a minimum of 10 percent of the total weight of the product, (2) the epoxy resin represents a maximum of 80 percent of the total weight of the product, and (3) the curing agent represents 5 to 40 percent of the total weight of the product.

Excluded from the scope are preimpregnated fabrics or fibers, often referred to as "pre-pregs," which are composite materials consisting of fabrics or fibers (typically carbon or glass) impregnated with epoxy resin.

This merchandise is currently classifiable under Harmonized Tariff Schedule of the United States (HTSUS) subheading 3907.30.0000. Subject merchandise may also

be entered under subheadings 3907.29.0000, 3824.99.9397, 3214.10.0020, 2910.90.91, 2910.90.9000, 2910.90.2000, and 1518.00.4000. The HTSUS subheadings are provided for convenience and customs purposes only; the written description of the scope is dispositive.

**D. Class Or Kind Of Merchandise And Domestic Like Product<sup>71</sup>**

The epoxy resins covered by these investigations constitute a single class or kind of merchandise. Furthermore, pursuant to 19 U.S.C. § 1677(10), the epoxy resins produced by the domestic industry represent the product that is “like, or in the absence of like, most similar in characteristics and uses with the article subject to investigation.” Thus, as explained in **Section III** below, there is a single like product in these investigations, which includes all epoxy resins described by the scope of these investigations.

**E. Countries Of Exportation<sup>72</sup>**

The countries in which the subject merchandise is manufactured or produced are China, India, South Korea, Taiwan, and Thailand. Data regarding U.S. imports from these countries are included in **Exhibit I-14**. As explained in Section IV.A below, Petitioner is aware that epoxy resins made by Chinese producers are also being imported into the United States from Canada.

**F. Producers, Importers,<sup>73</sup> And Purchasers<sup>74</sup> Of The Subject Merchandise**

Section II.A provides the contact information of U.S. producers of epoxy resins.

The names, addresses, and contact information of the companies that the Petitioner believes may have imported the subject merchandise into the United States during the most recent twelve-month period preceding the filing of the petitions are listed in **Exhibit I-15**. A list of purchasers is provided in **Exhibit I-16**.

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<sup>71</sup> 19 C.F.R. § 207.11(b)(2)(iv).

<sup>72</sup> See 19 C.F.R. § 351.202(b)(6).

<sup>73</sup> See 19 C.F.R. § 207.11(b)(2)(iii); 19 C.F.R. § 351.202(b)(9).

<sup>74</sup> See 19 C.F.R. § 207.11(b)(2)(v).

Contact information for all parties was collected via Petitioner’s market knowledge, as supplemented by research on the Internet and elsewhere. The exhibits referenced above reflect all information that is reasonably available to Petitioner at this time.

**G. Subject Producers and Exporters<sup>75</sup>**

The names, addresses, and contact information of the companies that the Petitioner believes may have produced and/or exported the subject merchandise are listed in **Exhibit I-17**.

**H. Volume And Value Of Subject Merchandise**

An analysis of the volume and value of subject merchandise imported into the United States during the 2021-2023 period is presented below in Section IV.C.2.

**III. THE DOMESTIC LIKE PRODUCT AND THE DOMESTIC INDUSTRY**

**A. The Domestic Like Product Includes All Epoxy Resins Covered By The Scope**

The domestic like product is defined as the product that is “like, or in the absence of like, most similar in characteristics and uses with the article subject to investigation.”<sup>76</sup> In these petitions, the “article subject to investigation” includes all items covered by the scope. Application of the Commission’s traditional like product factors demonstrates that all epoxy resins covered by these investigations constitute a single like product. The analysis below confirms that the domestic like product should be defined coextensive with the scope.

**1. Legal standard**

By statute, the Commission’s analysis of the domestic like product begins with the “article subject to an investigation,” *i.e.*, the subject merchandise as determined by the

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<sup>75</sup> See 19 C.F.R. § 351.202(b)(7)(i)(A-B).

<sup>76</sup> 19 U.S.C. § 1677(10).

Department.<sup>77</sup> Therefore, the scope of the imported merchandise is the starting point for the Commission's analysis.<sup>78</sup> The Commission then defines the domestic like product in light of the imported articles covered by the scope.

The decision regarding the appropriate domestic like product is a factual determination, and the Commission has applied the statutory standard of "like" on a case-by-case basis.<sup>79</sup> When making its domestic like product determination, the Commission typically considers the following factors: (1) the physical characteristics and uses of the products; (2) their interchangeability; (3) their channels of distribution; (4) customer and producer perceptions of the products; (5) whether they are produced using similar manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price.<sup>80</sup> No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.<sup>81</sup> The Commission looks for clear dividing lines among possible like products and disregards minor variations.<sup>82</sup>

**2. The like product factors normally considered by the Commission support finding a single like product in these investigations**

**a) Physical characteristics and uses**

All epoxy resins covered by these investigations share the following physical characteristics: (1) they are prepolymers or polymers containing epoxy groups; (2) they are uncured; (3) they are thermosetting resins that do not develop useful properties until they are

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<sup>77</sup> See *Thermal Paper from Germany, Japan, Korea, and Spain*, Inv. Nos. 731-TA-1546-1549 (Final), USITC Pub. 5237 (Nov. 2021) at 4 (hereinafter *Thermal Paper*).

<sup>78</sup> *Id.*

<sup>79</sup> *Id.* at 5.

<sup>80</sup> See *Nippon Steel Corp. v. United States*, 19 C.I.T. 450, 455 (1995); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

<sup>81</sup> *Thermal Paper* at 5.

<sup>82</sup> *Id.*

reacted with a suitable curative; (4) they have high reactivity, being receptive to a wide range of modifiers and bonding well with different materials; (5) they have very strong adhesive qualities; (6) they have great durability; and (7) after curing, they have strong resistance to chemicals and moisture.

Furthermore, they have similar uses: they are used as adhesives or coatings or as a construction material when a strong bond is required. All epoxy resins can be used in either liquid, semi-solid, or solid state, and they can be applied in pure form or in a blend. Thus, this factor supports treating all epoxy resins as part of the same domestic like product.

**b) Interchangeability**

Because epoxy resins all generally serve the same type of purposes and uses – namely, as adhesives, coatings, or similar uses – they are broadly interchangeable. Depending on the specific application, a user might prefer an epoxy resin with a specific weight or viscosity, or a product with an improved high-temperature resistance, electrical insulation performance, ultraviolet resistance, or faster curing process. But these preferences do not create a clear distinction for products within the scope. Indeed, it is not uncommon for the same customer to purchase multiple types of epoxy resins. Thus, this factor supports treating all epoxy resins as part of the same domestic like product.

**c) Channels of distribution**

As a general matter, epoxy resins may be sold directly to end users, or they may be sold through distribution. Epoxy resins may be sold directly to customers who use the product, as purchased, in the desired application and to customers that create a formulation containing epoxy resins, which will later be used internally or resold. Epoxy resins are also sold through



distributors who repackage the epoxy resin for sale to purchasers who require smaller volumes of epoxy resins.

**d) Customer and producer perceptions**

Both customers and producers generally recognize that the epoxy resins covered by these cases belong to the same industry. For example, Olin’s website groups all these products together on a page dedicated to epoxy resins, comprising information on “liquid epoxy resins,” “solid epoxy resins,” “epoxy Novolac Resins,” as well as systems containing epoxy resins and products to be applied with epoxy resins (*e.g.*, curing agents, tougheners).<sup>83</sup> Westlake also has a website grouping the information on all epoxy resins, as well as its curing agents and modifiers.<sup>84</sup> [

] For example, [

] <sup>85</sup>

**e) Common manufacturing facilities, production processes, and production employees**

All epoxy resins are generally produced in the same manufacturing facilities using the same production processes and employees. Olin’s domestic production of epoxy resins takes

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<sup>83</sup> “Olin Epoxy”, *Olin*, available at <https://olinepoxy.com/> (last visited March 28, 2024), provided as **Exhibit I-18**.

<sup>84</sup> “Westlake Epoxy”, *Westlake*, available at <https://www.westlakeepoxy.com/en-US/> (last visited March 28, 2024), provided as **Exhibit I-19**.

<sup>85</sup> [ ], provided as **Exhibit I-20**. [

provided as **Exhibit I-21**. ]

place at its manufacturing facility in Freeport, Texas.<sup>86</sup> Westlake makes epoxy resins at similar manufacturing facilities in Deer Park, Texas; Lakeland, Florida; and Argo, Illinois.<sup>87</sup>

**f) Price**

As described above, epoxy resins are generally made from the same type of material, are generally produced in the same facilities by the same workers, and are generally marketed together. Epoxy resins are generally used for the same purposes and are often purchased together. As a result, prices for all types of epoxy resins tend to be influenced by the same factors and generally move together. Therefore, like the other factors normally considered by the Commission, the pricing factor also supports treating all epoxy resins as part of the same domestic like product.

**g) Conclusion**

A review of the Commission's usual factors shows a significant overlap between all epoxy resins covered by these investigations. Given this fact, the Commission should find that all epoxy resins at issue constitute a single like product.

**B. The Domestic Industry Includes All U.S. Producers Of The Domestic Like Product**

The Act defines the term "industry" as "the 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."<sup>88</sup> To the best of the Petitioner's knowledge and belief, the petitioning companies account for all domestic production

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<sup>86</sup> Olin Corporation Form 10-K For the fiscal year ended December 31, 2023 ("Olin 2023 10K Form") at 7, provided as **Exhibit I-22**.

<sup>87</sup> See Westlake Annual Report the fiscal year ended December 31, 2022 at 5, provided as **Exhibit I-23**.

<sup>88</sup> 19 U.S.C. § 1677(4)(A).

in the United States. They do not believe that any U.S. producers should be excluded from the domestic industry due to related party status.

#### **IV. THE DOMESTIC INDUSTRY HAS SUFFERED MATERIAL INJURY BY REASON OF SUBJECT IMPORTS<sup>89</sup>**

##### **A. Subject Imports Are Not Negligible**

If the Commission finds that imports of the subject merchandise from a particular country are “negligible,” then the investigation into those imports shall be terminated.<sup>90</sup> Under the Act, dumped and subsidized imports are “negligible” if 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.<sup>91</sup> The Act further provides that, in the context of a threat of injury determination, the Commission shall not treat imports as negligible if it determines that there is a potential that subject imports will imminently exceed the relevant negligibility threshold.<sup>92</sup> In analyzing negligibility, the Commission may make reasonable estimates on the basis of available statistics.<sup>93</sup>

Information on subject imports for the most recent 12-month period for which Census data are available is contained in **Exhibit I-24**. These data demonstrate that epoxy resin imports from South Korea, Taiwan, and Thailand each clearly accounted for more than three percent of total imports over the period. Thus, imports from these three countries are not negligible.

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<sup>89</sup> See 19 C.F.R. § 351.202(b)(10).

<sup>90</sup> 19 U.S.C. §§ 1671b(a)(1), 1673b(a)(1).

<sup>91</sup> See 19 U.S.C. § 1677(24)(A)(i). In the case of countervailing duty investigations involving developing countries (as designated by the United States Trade Representative (USTR)), the statute indicates that the negligibility limits are 4 percent and 9 percent, rather than 3 percent and 7 percent. 19 U.S.C. § 1677(24)(B). However, in 2020, the USTR published a revised list of the countries that are eligible for special negligible import volume standards in CVD investigations, which did not include India, nor China. Office of the United States Trade Representative, *Designations of Developing and Least-Developed Countries Under the Countervailing Duty Law*, 85 Fed. Reg. 7613 (Feb. 10, 2020).

<sup>92</sup> 19 U.S.C. § 1677(24)(A)(iv).

<sup>93</sup> 19 U.S.C. § 1677(24)(C).

Census data currently available to the Petitioner indicates that imports from China and India under the relevant HTSUS code are each below the three percent statutory negligibility threshold. We will discuss India in more detail below. However, it seems clear that imports from China should not be considered negligible and should be included in the analysis of present material injury.

Petitioner is aware that a significant portion of the imported epoxy resins entering the U.S. market from Canada are produced in China. Indeed, [

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It seems likely that these imports are being brought into this country through Canada to avoid the Section 301 duties that the U.S. government has imposed on imports from China. The available trade data corroborates the existence of this scheme.

First, since the imposition of the Section 301 duties, in August of 2018, the imports of epoxy resins from China into Canada have increased significantly. During the period of investigation, the imported volume surged from 3,986,751 pounds in 2021 to 8,134,408 metric tons in 2023, an increase of 104 percent.

#### Canadian Imports of Epoxy Resins (pounds)

Source	2021	2022	2023
China	3,986,751	5,941,751	8,134,408

Source: Global Trade Atlas HTS Nos. 3907.30.

Second, Canada ranks among the largest sources of U.S. imports of epoxy resins in the period of investigation,<sup>95</sup> even though [

<sup>94</sup> [

] [

], provided

as **Exhibit I-25**.

<sup>95</sup> Census data records over 10,000,000 pounds each year of the period of investigation as imports from Canada. See Exhibit 14 (Import Data for the Subject Imports 2021 to 2023).

] <sup>96</sup> It seems clear, therefore, that imports into the United States that are [ ] from Canada [ ] Given that China is a major producer of epoxy resins, and that [ ] it seems obvious that [ ]

Given these facts, it seems obvious that U.S. import volumes from China are not negligible within the meaning of the statute. Indeed, even if only 35.1 percent of the U.S. imports from Canada<sup>97</sup> were considered of Chinese origin, China would not be considered negligible in these investigations. Below is a revised table summarizing the U.S. imports of epoxy resin in the negligibility period correcting this transshipment issue using such an estimate explained above.

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<sup>96</sup> [ ] at 47, provided as Exhibit I-7.

<sup>97</sup> The uncorrected volume of imports from Canada to the United States in the negligibility period is 11,392,857 pounds. See Exhibit I-24 (Import Data for the Subject Imports Most Recent 12 Months).  $4,000,000 / 11,392,857 = 0.3511 = 35.1$  percent.

<b>Country</b>	<b>Volume in Pounds (Feb. 2023 to Jan. 2024)</b>	<b>% of Total U.S. Imports</b>
South Korea	122,315,734	48.6%
Taiwan	38,008,631	15.1%
Germany	20,746,375	8.2%
Thailand	13,094,246	5.2%
Netherlands	10,406,636	4.1%
Japan	9,433,239	3.7%
China	7,589,730	3.0%
Canada	7,392,857	2.9%
India	4,557,750	1.8%
Mexico	3,726,067	1.5%
Spain	3,091,899	1.2%
United Kingdom	1,925,066	0.8%
Israel	1,957,191	0.8%
Others	7,462,007	3.0%

As for India, the Commission will need to collect questionnaire data from importers to calculate an accurate assessment of its share of U.S. imports during the relevant time frame. At this point, however, the record does not contain sufficient information to make a determination regarding how imports from India should be analyzed for purposes of present material injury. However, even if the Commission were to determine that imports from India are negligible for purposes of present material injury, the Commission should find that subject imports from this country are not negligible for purposes of threat of material injury.

As outlined above, pursuant to 19 USC 1677(24)(A)(iv), subject imports from a particular country will not be treated as negligible for purposes of the Commission's analysis of threat of material injury if the Commission concludes that there is a potential that those imports will imminently account for a share of imports that exceeds the negligibility threshold (hereinafter, "threat exception").

First, in the latter part of the period of negligibility, the U.S. imports from India have increased. In fact, for three months in the second half of 2023, India exceeded the negligibility threshold.<sup>98</sup>

Second, [

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Third, the Aditya Birla Group, the Indian conglomerate, owns and controls both the Indian producer and the only producer in Thailand, which means that these producers can coordinate in targeting the U.S. market with unfair trade.

Given these facts, the Commission should conclude that imports from India will imminently account for more than the negligibility threshold, and the Commission should not treat subject imports from India as negligible for purposes of the Commission's analysis of threat of material injury. Given these facts, the investigations into China and India should not be terminated on grounds of negligibility.

#### **B. The Subject Imports Should Be Cumulated**

The Act provides for the cumulative analysis of subject imports from more than one country, subject to certain conditions and exceptions. When deciding whether subject imports are materially injuring a domestic industry, the Commission must cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which

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<sup>98</sup> See Exhibit I-24 (Import Data for the Subject Imports Most Recent 12 Months) (Imports from India represented 3.9, 3.0, and 3.5 percent of the total U.S. imports in July, August, and September of 2023).

petitions were filed on the same day, if such imports compete with each other and with the domestic like product in the U.S. market.<sup>99</sup> In assessing whether imports compete with each other and with the domestic like product, the Commission generally has considered the following four factors:

- The degree of *fungibility* between the imports from different countries and between imports and the domestic like product;
- The presence of sales or offers to sell in the *same geographic markets* of imports from different countries and the domestic like product;
- The existence of *common or similar channels of distribution* for imports from different countries and the domestic like product; and
- Whether the imports are *simultaneously present* in the market.<sup>100</sup>

Although no single factor is necessarily determinative, and the list of factors is not exclusive, these factors provide the Commission with a framework for determining whether the subject imports compete with each other and with the domestic like product.<sup>101</sup> When assessing whether to cumulate subject imports from multiple countries, the Commission looks only for a reasonable overlap of competition.<sup>102</sup>

In these investigations, the statutory criteria for cumulation are met, and subject imports should be cumulated for purposes of the material injury analysis. First, the petitions covering imports of epoxy resin from subject countries and are being filed on the same day. Second, as we discuss below, there is a reasonable overlap of competition among imports from the subject countries and the domestic like product. As a result, the Commission should find that subject

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<sup>99</sup> 19 U.S.C. § 1677(7)(G).

<sup>100</sup> See *Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (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).

<sup>101</sup> *Granular Polytetrafluoroethylene (PTFE) Resin from India and Russia*, Inv. Nos. 701-TA-663-664 & 731-TA-1555-1556 (Final), USITC Pub. 5285 (March 2022) at 16-17.

<sup>102</sup> *Granular Polytetrafluoroethylene (PTFE) Resin from India and Russia*, Inv. Nos. 701-TA-663-664 & 731-TA-1555-1556 (Final), USITC Pub. 5285 (March 2022), Views at 16-17.



imports from the five subject countries compete with one another and with the domestic like product and should cumulate them for purposes of its material injury analysis. We discuss each of the cumulation factors below.

***Fungibility.*** Subject and domestic epoxy resins share the same physical characteristics and specifications. The physical characteristics of epoxy resins sold in the U.S. market are the same whether produced by petitioning companies or imported from the subject countries. There is a high degree of fungibility between the subject imports from each source and the domestic like product. Thus, the Commission should find that epoxy resins from each of the subject countries is fungible with one another and the domestic like product.

***Channels of Distribution.*** Subject imports and the domestic like product are sold directly to end users or to distributors. Thus, imported epoxy resins from the subject countries and the domestic like product are being sold in the same channels of trade in the U.S. market.

***Geographic Markets.*** Domestically produced epoxy resins and imported epoxy resins from all subject sources serve the same geographic areas of the U.S. market. As shown by official import statistics for the 2021-2023 period, subject imports entered at overlapping ports of entry throughout the United States.<sup>103</sup> These data show that subject imports entered through all the U.S. geographic regions typically used in the Commission's U.S. Importers' Questionnaire.<sup>104</sup> Consequently, there is extensive geographic overlap among subject imports. Furthermore, [

] <sup>105</sup> Thus, the available information on this factor indicates that subject imports compete against each other and the domestic like product throughout the United States.

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<sup>103</sup> See **Exhibit I-26** (Geographic Distribution of the Subject Imports).

<sup>104</sup> Exhibit I-26 (Geographic Distribution of the Subject Imports).

<sup>105</sup> Exhibit I-16 (List of Purchasers).

***Simultaneous Presence.*** Petitioner sold substantial volumes of epoxy resins in the U.S. market throughout the 2021-2023 period.<sup>106</sup> For large portions of that same period, epoxy resins from each of the subject countries was simultaneously present in the U.S. market.<sup>107</sup> Thus, the data relating to simultaneous presence also support a finding of a reasonable overlap of competition.

***Conclusion.*** The evidence available to Petitioner demonstrates that there is a reasonable overlap of competition between imports from each of the subject countries and the domestic like product. Accordingly, the Commission should cumulate subject imports from all subject countries.

### **C. Subject Imports Have Caused Material Injury To The Domestic Industry**

In antidumping and countervailing duty investigations, the Commission must determine whether an industry in the United States is materially injured, or threatened with material injury, by reason of imports of subject merchandise.<sup>108</sup> The Act defines “material injury” as “harm which is not inconsequential, immaterial, or unimportant.”<sup>109</sup>

When analyzing the causal link between unfairly traded imports and material injury, the Commission has recognized that “{i}n many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry.”<sup>110</sup> Nonetheless, the Commission “need not isolate the injury caused by other factors from injury caused by unfairly traded imports.”<sup>111</sup> Furthermore, the law does not “require that unfairly traded imports be the ‘principal’ cause of injury or contemplate that injury from unfairly traded

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<sup>106</sup> Exhibit I-5 (Petitioner’s Trade and Financial Data).

<sup>107</sup> Exhibit I-14 (Import Data for the Subject Imports 2021 to 2023).

<sup>108</sup> See 19 U.S.C. §§ 1671d(b)(1), 1673d(b)(1).

<sup>109</sup> 19 U.S.C. § 1677(7)(A).

<sup>110</sup> See *Sodium Nitrate from Russia*, Inv. No. 701-TA-680 (Final), USITC Pub. 5342 (Aug. 2022) at 18.

<sup>111</sup> *Id.* at 19.

imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.”<sup>112</sup>

When assessing whether the domestic industry has been materially injured by reason of imports of subject merchandise, the Commission considers: (1) the volume of imports of the subject merchandise, (2) the effect of imports of subject merchandise on prices in the United States for domestic like products, and (3) the impact of imports of such merchandise on producers of the domestic like product in the context of production operations within the United States.<sup>113</sup> As shown below, each of these statutory factors shows that subject imports cause material injury to the domestic industry.

**1. Key conditions of competition in the epoxy resin market make the domestic industry highly susceptible to the adverse impact of subject imports**

Under the Act, the Commission is directed to evaluate all relevant economic factors specified in the statute “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”<sup>114</sup> Here, there are several conditions of competition in the market for epoxy resins that make the domestic industry highly susceptible to the adverse impact of unfairly priced subject imports.

**a. The subject imports and domestic like product are highly interchangeable, highly substitutable, and compete largely on the basis of price**

Because epoxy resins all generally serve the same purposes and uses – namely, bonding and coating – they are broadly interchangeable. Epoxy resins are a commodity product, and the physical characteristics of epoxy resins sold in the U.S. market are the same whether produced

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<sup>112</sup> *Id.* at 19-20.

<sup>113</sup> 19 U.S.C. § 1677(7)(B)(i). The Commission may also consider “such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.” 19 U.S.C. § 1677(7)(B)(ii).

<sup>114</sup> 19 U.S.C. § 1677(7)(B)(c)(iii).

by petitioning companies or imported from the subject countries. Epoxy resins, regardless of where produced, have the same chemical composition and – when sold in the United States – must meet the same industry requirements. Certain subject exporters even sell epoxy resins using the petitioning companies’ proprietary product names as a reference.<sup>115</sup> Thus, imports of epoxy resins from the subject countries are highly interchangeable with each other and with the domestic like product, and a high degree of substitutability exists between subject imports and domestic epoxy resins. Given the high level of substitutability between the subject and domestic merchandise, price is a critical factor in purchase decisions.

**b. Demand for epoxy resin is relatively price inelastic**

Epoxy resin consumption is driven by demand for liquid and powder industrial coatings; demand for civil engineering materials used in the construction of infrastructure like roads, bridges, ports, factories, and airports; the substitution of epoxy/fiberglass and epoxy/carbon fiber composites for wood, metal, and cement in automotive, aerospace, building and construction, and marine applications; and the proliferation of wind energy generation where epoxy systems are used to fabricate turbine blades. Significantly, however, epoxy resins generally represent a negligible portion of the cost of a new building, car, aircraft, or wind turbine. Thus, aggressive subject import prices do not lead to a meaningful increase in demand. Instead, low-priced subject imports simply put downward pressure on prices for the domestic like product.

**c. Epoxy resin plants are designed to operate at high levels of capacity utilization**

Epoxy resin production is highly capital-intensive. Epoxy resin plants are designed to run continuously at full capacity for efficient production. Thus, reductions in production below

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<sup>115</sup> E.g., Chinese producer advertising its product as “similar quality with Der 331” in reference to Olin’s D.E.R. 331. “Liquid Epoxy Resin”, *Made-in-China*, available at <https://honrepoxy.en.made-in-china.com/product/IOHAGCUzbTMB/China-Standard-Liquid-Epoxy-Resin-Similar-Quality-with-Der-331-Yd-128-Ker-828.html> (last visited March 28, 2024), provided as **Exhibit 27**.

full capacity resulting from subject import competition have a direct and harmful impact on domestic producers' per-unit fixed costs and profitability.

**2. The volume of subject imports is significant**

**a. Census data provides the best information currently available regarding subject import volumes**

Under the Department's regulations, a petition should contain the "volume and value of the subject merchandise imported during the most recent two-year period and any other recent period that the petitioner believes to be more representative."<sup>116</sup> In this case, the best information reasonably available to the Petitioner regarding subject import volumes and values comes from U.S. Census data showing imports under HTSUS number 3907.30.0000. Thus, throughout this discussion, we will use Census data under this HTSUS number to estimate the volume and value of subject merchandise. In Exhibit I-24, we provide import volume and value data for the likely period of investigation at the Commission in its preliminary investigations – *i.e.*, for 2021 to 2023.<sup>117</sup>

**b. Census data indicates that subject import volumes are significant in both absolute and relative terms**

The Act provides that "{i}n 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."<sup>118</sup> As demonstrated below, the evidence available to Petitioner establishes that subject imports are significant, both in absolute terms and relative to apparent U.S. consumption.

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<sup>116</sup> 19 C.F.R. § 351.202(b)(8).

<sup>117</sup> Exhibit I-24 (Import Data for the Subject Imports 2021 to 2023).

<sup>118</sup> 19 U.S.C. § 1677(7)(C)(i).

As noted above, Exhibit I-24 contains Census import data for HTSUS number 3907.30.0000.<sup>119</sup> We also provide calculations of apparent U.S. consumption and U.S. market shares in Exhibit I-4<sup>120</sup> and the ratio of subject imports to domestic production from 2021 to 2023 in **Exhibit I-28**. According to those data:

- Cumulated subject imports were 189.1 million pounds in 2021, 237.7 million pounds in 2022, and 186.3 million pounds in 2023.<sup>121</sup>
- Cumulated subject imports' share of apparent domestic consumption was [ ] percent in 2021, [ ] percent in 2022, and [ ] percent in 2023.<sup>122</sup>
- The ratio of cumulated subject imports to domestic production was [ ] percent in 2021, [ ] percent in 2022, and [ ] percent in 2023.<sup>123</sup>

These data demonstrate that, throughout the period of investigation, cumulated subject imports have been significant in absolute terms and relative to domestic consumption and domestic production. The data also demonstrate that subject imports have increased significantly relative to domestic consumption. Furthermore, cumulated subject imports have taken U.S. market share from the domestic industry over the 2021-2023 period. Specifically, subject imports increased their share of the U.S. market from [ ] percent in 2021 to [ ] percent in 2022 and to [ ] percent in 2023, while the domestic industry's share went from [ ] percent in 2021 to [ ] percent in 2022 and [ ] percent in 2023.<sup>124</sup> These figures show that import volumes of epoxy resin from the subject countries are significant, both in absolute terms and relative to the domestic consumption and production.

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<sup>119</sup> Exhibit I-24 (Import Data for the Subject Imports 2021 to 2023).

<sup>120</sup> Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>121</sup> Exhibit I-24 (Import Data for the Subject Imports 2021 to 2023).

<sup>122</sup> Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>123</sup> Exhibit I-28 (Ratio of Subject Imports to Domestic Production 2021 to 2023).

<sup>124</sup> Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

### 3. The price effects of subject imports are significant

In evaluating the effects of subject imports on prices, the Commission shall consider whether: (1) there has been significant underselling by the imported merchandise as compared with the price of the domestic like product, and (2) the effect of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.<sup>125</sup> As shown below, both of these factors support a finding that the adverse price effects of unfairly traded epoxy resins were significant.

#### a. Significant underselling

In its most recent annual report, Olin – one of the petitioning companies here – stated that “Epoxy segment results in 2023 have been impacted by significant exports out of Asia into the European and North American markets, negatively impacting pricing and volumes.”<sup>126</sup> In other words, Olin has already told investors that the subject imports forced it to accept prices that were lower than they would have been in a fair market. This fact strongly indicates that subject imports are underselling the domestic like product.

Other compelling evidence supports the same conclusion. The table below provides a comparison of the average unit values (“AUVs”) of Petitioner’s U.S. commercial shipments to the AUVs of subject imports during that period.<sup>127</sup>

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<sup>125</sup> 19 U.S.C. § 1677(7)(B)(ii).

<sup>126</sup> Olin 2023 10K Form, at 28, provided as Exhibit I-22. *See also id.* at 32.

<sup>127</sup> **Exhibit I-29** (Underselling Comparisons 2021 to 2023).

AUV comparison (\$/1,000 pound)					
Item		2021	2022	2023	
	Petitioner's U.S. commercial shipments (A)	[			
Cumulated subject imports (B)	[				]
Difference in domestic and subject import AUVs (C = A – B)	[				]

These data show [ ] between U.S. pricing and the average unit value of imports from the subject countries between 2021 and 2023. Accordingly, the available information shows significant underselling by cumulated subject imports.

The data above represents the best information available to Petitioner at this time. However, as part of its preliminary phase investigations, the Commission can obtain more detailed pricing data for both the domestic like product and subject imports. Petitioner requests that the Commission collect data for the following representative products:

**Product 1.** – Bisphenol A liquid epoxy resin, basic commodity grade (*i.e.*, D.E.R. 331, EPON 828, KER 828, YD 128, NPEL128, BE-188, and SM 828), sold in bulk (ISO Tanks or Tank Truck) on a delivered basis.

**Product 2.** – Bisphenol A liquid epoxy resin, basic commodity grade (*i.e.*, D.E.R. 331, EPON 828, KER 828, YD 128, NPEL128, BE-188, and SM 828), sold in packages (Totes, Intermediate Bulk Containers (“IBC’s”), or drums) on a delivered basis.

**Product 3.** – Bisphenol A solid epoxy resin, Type 3, Epoxy Equivalent Weight (“EEW”) based on solids Range between 700-850 g/eq (*i.e.*, D.E.R. 663U, D.E.R. 663UE, EPON 2003, KD 213, KD 243C, KER 3033, NPES 903H, BE 503, YD 903), sold on a delivered basis.

**Product 4.** – Bisphenol A solid epoxy resin, Type 4, Epoxy Equivalent Weight (“EEW”) based on solids Range between 800-1,000 g/eq (*i.e.*, D.E.R. 664UE, EPON 2004, KD 214L, NPES 904H, BE 504H), sold on a delivered basis.

#### **b. Other adverse price effects**

In addition to underselling, available information shows that the effect of subject imports “otherwise depresses prices to a significant degree or prevents price increases, which otherwise



would have occurred, to a significant degree.”<sup>128</sup> As we have demonstrated above, subject imports are entering the U.S. market in significant volumes and taking market share from domestic producers by offering aggressively low prices to purchasers in the marketplace. Subject imports and the domestic like product are commercially interchangeable. Given that price is an important factor in purchasing decisions of epoxy resins, it is clear that the low prices being offered by the subject imports are having significant adverse effects on the domestic industry’s prices in the U.S. market.

Indeed, the data in the preceding section show that, from 2022 to 2023, the AUVs for cumulated subject imports plummeted from \$2,720 per thousand pounds to \$1,670 per thousand pounds. This decline represents a fall of *62.9 percent* in one year. [

].<sup>129</sup> Thus, the available information shows that cumulated subject imports have significantly depressed U.S. prices for the domestic like product.

### **c. Lost sales and lost revenues**

As shown in **Exhibit I-30** (which contains available information relating to lost sales and lost revenues for the Petitioner),<sup>130</sup> the domestic industry has lost significant sales and revenues due to aggressive pricing competition by the subject imports.<sup>131</sup> This evidence, combined with

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<sup>128</sup> 19 U.S.C. § 1677(7)(B)(ii).

<sup>129</sup> See Exhibit I-29 (Underselling Comparisons 2021 to 2023); Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>130</sup> In accordance with 19 C.F.R. § 207.11(b)(2)(v), Petitioner will submit lost sales and lost revenues allegations electronically in the manner specified in the Commission’s Handbook on Filing Procedures.

<sup>131</sup> Allegations Regarding Lost Sales and Revenues, provided as Exhibit I-30.

the other evidence cited above, leaves no doubt that the adverse price effects of subject imports have been significant.

#### **4. Subject imports have had a significant adverse impact on the domestic industry**

Under the Act, the Commission is directed to assess whether the subject imports have had a significant adverse impact on the industry's production operations in the United States.<sup>132</sup>

When examining the impact of subject imports, the Commission is directed to evaluate all relevant economic factors that have a bearing on the state of the industry in the United States, including, but not limited to:

- 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,
- factors affecting domestic prices,
- actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and
- 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.<sup>133</sup>

The Commission must evaluate all relevant economic factors within the context of the business cycle and conditions of competition that are distinctive to the affected industry.<sup>134</sup>

The available evidence indicates that, during the 2021-2023 period, the significant volumes of aggressively priced subject imports had a significant adverse impact on the domestic industry's condition. In particular, the evidence shows that:

- The domestic industry lost significant market share to subject imports [ ].

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<sup>132</sup> 19 U.S.C. § 1677(7)(B)(iii).

<sup>133</sup> 19 U.S.C. § 1677(7)(C)(iii).

<sup>134</sup> *Id.*

- U.S. producers' share of domestic consumption of epoxy resin decreased by [ ] percentage points from 2021 to 2023, while cumulated subject imports' share increased by [ ] percentage points.<sup>135</sup>
- [ ],<sup>136</sup> it was [ ]
- [ ]<sup>137</sup>
- This loss of market share was a significant factor causing [ ] in Petitioner's U.S. shipments, production, and capacity utilization. From 2021 to 2023:
  - Petitioner's U.S. shipments [ ];
  - Petitioner's production [ ];
  - Petitioner's capacity utilization rate [ ]<sup>138</sup>
- Subject imports have adversely affected the financial performance of Petitioner's epoxy resin operations.
  - Petitioner's [ ]
  - Petitioner's [ ]<sup>139</sup>

Given these facts, the Commission should find that the adverse impact of subject imports was significant.

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<sup>135</sup> Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>136</sup> Exhibit I-4 (Apparent Domestic Consumption and U.S. Market Shares 2021 to 2023).

<sup>137</sup> Exhibit I-5 (Petitioner's Trade and Financial Data 2021 to 2023).

<sup>138</sup> Exhibit I-5 (Petitioner's Trade and Financial Data 2021 to 2023).

<sup>139</sup> Exhibit I-5 (Petitioner's Trade and Financial Data 2021 to 2023).

## 5. Conclusion

As shown above, evidence relevant to each statutory factor that the Commission considers with respect to material injury – the volume of subject imports, the adverse price effects of subject imports, and the adverse impact of subject imports – supports the conclusion that the domestic epoxy resin industry is materially injured by reason of cumulated subject imports.

### **D. Subject Imports Threaten The Domestic Industry With Further Material Injury Going Forward**

Under the Act, the Commission is directed to consider eight factors when determining whether an industry in the United States is threatened with material injury by reason of sales of the subject merchandise.<sup>140</sup> In addition to those eight factors, the Commission is also directed to consider “any other demonstrable adverse trends that indicate the probability that there is likely to be material injury” by reason of subject imports.<sup>141</sup> As discussed below, these factors indicate that, in the absence of trade relief, the subject imports threaten to cause further material injury to the domestic industry in the imminent future.

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<sup>140</sup> See 19 U.S.C. §§ 1677(7)(F)(i)(I) to (VIII). Please note that one of these factors, which relates to raw agricultural products, is not relevant here. See 19 U.S.C. § 1677(7)(F)(i)(VII).

<sup>141</sup> 19 U.S.C. § 1677(7)(F)(i)(IX).

## 1. The likely volume of subject imports will be significant

Under the Act, the Commission is directed to consider several factors relating to the likely volume of subject imports in the absence of trade relief. In this case, all relevant factors for which the Petitioner has information demonstrate that, unless trade relief is imposed, imports of epoxy resins from the subject countries will continue to damage the U.S. market.<sup>142</sup>

First, under the Act, the Commission is directed to consider whether there has been “a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports.”<sup>143</sup> As we have already shown above, imports of epoxy resins from the subject countries have been significant and have increased significantly relative to domestic consumption since 2021. During this period, subject imports have taken sales and market share from the domestic industry. These facts demonstrate that, in the absence of trade relief, the subject imports will continue entering the market in significant volumes in the imminent future.

Under the Act, the Commission is also directed to consider whether there is “any existing unused capacity or {an} imminent, substantial increase in production capacity” in the subject countries that indicates “the likelihood of substantially increased imports of the subject merchandise into the United States.”<sup>144</sup> There is only a limited amount of public information concerning the capacity and unused capacity levels of the epoxy resin industries in the subject countries. Nonetheless, the available information indicates that subject foreign producers have large production capacities and ample unused capacity to direct significant additional volumes of subject imports into the U.S. market. Specifically, the table below shows data on subject country

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<sup>142</sup> 19 U.S.C. § 1677(7)(F)(i)(III).

<sup>143</sup> *Id.*

<sup>144</sup> 19 U.S.C. § 1677(7)(F)(i)(II).

production capacity, production, and unused capacity sourced from [ ], and it compares cumulated unused capacity to Petitioner’s calculation of apparent domestic consumption in 2023. These figures show that subject producers’ aggregate unused capacity is almost [ ] than total apparent U.S. consumption in 2023.

Subject Capacity, Production, and Unused Capacity in 2021 (in metric tons unless otherwise noted)				
Country/Item		Capacity	Production	Unused Capacity
China <sup>145</sup>	[			]
India <sup>146</sup>	[			]
South Korea <sup>147</sup>	[			]
Taiwan <sup>148</sup>	[			]
Thailand <sup>149</sup>	[			]
Total	[			]
Total (in pounds)	[			]
Apparent U.S. consumption in 2023 (in pounds)	[			]
Ratio of unused capacity to apparent U.S. consumption	[			]

It is critical to understand that in several of these countries, the installed production capacity is significantly higher than its demand. For example, another industry report shows that, in 2022, China’s production capacity and domestic demand was [ ] metric tons and [ ] metric tons, respectively.<sup>150</sup> This fact indicates that in order to run their

<sup>145</sup> [ ]  
<sup>146</sup> [ ]  
<sup>147</sup> [ ]  
<sup>148</sup> [ ]  
<sup>149</sup> [ ]  
<sup>150</sup> [ ]

], provided as Exhibit I-31.

] (“[

facility at high levels of capacity utilization, producers in China must export [ ] volumes of epoxy resins.

The available data show that these issues are likely to further intensify in the near future. The industry report estimates that, starting in 2023, [ ]<sup>151</sup> The report also notes that [ ]<sup>152</sup>

In other words, it seems clear that, in the near future, China and other subject countries will benefit from [ ] of cheap, non-market ECH. Such a development would certainly encourage increased exports of epoxy resins, including exports to the United States. Furthermore, subject producers plan to add even more capacity to make epoxy resins:

- *China*: [ ]<sup>153</sup>
- *India*: [ ]<sup>154</sup>

Based on the available information, the industries in the subject countries evidently have ample amounts of unused capacity that can, and will, be used to ship significant amounts of additional epoxy resins to the United States unless orders are issued. More evidence along these lines will likely become available as the Commission issues questionnaires to subject producers.

The Act also directs the Commission to consider the potential for product shifting by subject producers.<sup>155</sup> If a subject producer can use the same equipment and employees to shift

<sup>151</sup> [ ], provided as Exhibit I-6.

<sup>152</sup> [ ], provided as Exhibit I-6.

<sup>153</sup> [ ], provided as Exhibit I-31.

<sup>154</sup> This amount also includes “formulated products and related products.” [ ] at 94, provided as Exhibit I-7.

<sup>155</sup> 19 U.S.C. § 1677(7)(F)(i)(VI).

output from another product to epoxy resin, then that producer can increase shipments of epoxy resin to the United States. In these investigations, as shown above, the Commission need not reach this factor because the available evidence indicates that producers in the subject countries can significantly increase shipments of epoxy resins to the United States without shifting production.

The Act also directs the Commission to consider inventories of the subject merchandise.<sup>156</sup> Epoxy resin is a shelf-stable product, and subject imports can remain in inventory and continue weighing on the U.S. market, taking sales and continuing to put downward pressure on U.S. pricing.

Moreover, [

] and in the absence of trade relief,

the volume of dumped and subsidized imports causing injury to U.S. producers will be even higher.

Finally, under the Act, the Commission is directed to consider whether subject producers benefit from subsidies in their home market, especially export subsidies, and whether these subsidies make it likely to cause them to increase their exports of the subject imports.<sup>157</sup> As we discuss in detail in Volumes VII to X of these petitions, the subject producers of epoxy resins in China, India, South Korea, and Taiwan are benefiting from a variety of subsidy programs provided in their home market, including export subsidies. Obviously, these subsidies, including

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<sup>156</sup> 19 U.S.C. § 1677(7)(F)(i)(V).

<sup>157</sup> 19 U.S.C. § 1677(7)(F)(i)(I).



subsidies that are specifically tied to exports of the subject epoxy resins, will encourage producers in these countries to increase their exports to the United States in the imminent future.

## **2. The likely price effects of subject imports are significant**

As part of its threat analysis, the Commission is directed to consider “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.”<sup>158</sup>

There is no question that, unless trade relief is provided to the domestic industry, the subject imports will enter the U.S. market at prices that will have a significant depressing and suppressing effect on domestic prices.

Epoxy resins are sold largely on the basis of price. As shown above, the subject imports have competed aggressively on price with the domestic industry, taken sales and market share from the domestic industry, and effectively made it impossible for the petitioning companies to obtain a true market price for their epoxy resins. To maintain sales volume, the petitioning companies must reduce prices or limit necessary price increases to avoid losing sales to subject imports. The commercial interchangeability of subject imports and the domestic like product and the adverse price effects of subject imports are documented in the lost sales and lost revenues allegations contained in these petitions.<sup>159</sup> In short, the available evidence demonstrates that the subject imports will continue to be offered at prices that will put downward pressure on domestic pricing, suppress domestic pricing levels, and increase demand for unfairly traded imports in the imminent future. Thus, the Commission should find that in the absence of trade relief, dumped and subsidized imports will enter the U.S. market at prices that will likely depress and suppress domestic pricing.

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<sup>158</sup> 19 U.S.C. § 1677(7)(F)(i)(IV).

<sup>159</sup> Lost Sales and Lost Revenues Chart, attached as Exhibit I-30.

### 3. The likely impact of subject imports is significant

In assessing whether the subject imports will have a significant impact on the domestic industry unless trade relief is provided, the Commission typically considers whether the domestic industry is vulnerable to the adverse impact of the subject imports in the imminent future.<sup>160</sup> As we have already shown, between 2021 and 2023 [

].<sup>161</sup> Given the [

], domestic producers are clearly

vulnerable to further material injury in the absence of trade relief. These facts render domestic producers susceptible to the likely adverse impact of the significant volumes of low-priced subject imports that will continue to enter the country in the imminent future in the absence of trade relief.

Under the Act, the Commission must also consider whether the subject imports will have a significant impact on the existing development and production efforts of the domestic industry as part of its threat analysis.<sup>162</sup> In these investigations, there is no doubt that [

] Thus, the Commission should conclude that unless antidumping and countervailing duty orders are issued, the subject imports will continue to have a significant adverse impact on the domestic industry's ability to make the on-going investments needed to maintain development and production efforts.

In sum, the likely volume, the likely price effects, and the likely impact of subject imports are all significant – unless domestic producers obtain trade relief. Thus, information

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<sup>160</sup> *E.g., Drill Pipe and Drill Collars from China*, Inv. Nos. 701-TA-474 & 731-TA-1176 (Final), USITC Pub. 4213 (February 2011) at 35-36.

<sup>161</sup> *See* Exhibit I-5 (Petitioner's Trade and Financial Data).

<sup>162</sup> 19 U.S.C. § 1677(7)(F)(i)(VIII) & (IX).

available to the Petitioner plainly shows that subject imports threaten domestic producers with additional material injury.

## V. CONCLUSION

As set forth in the other volumes of these petitions, imports of epoxy resins from China, India, South Korea, Taiwan, and Thailand are sold at less than fair value in the United States, and imports of epoxy resins benefit from countervailable subsidies. The domestic industry is materially injured and threatened with additional material injury by reason of the cumulated subject imports. To prevent further deterioration of the domestic industry, Petitioner urges the Department to initiate antidumping duty investigations on imports of epoxy resin from China, India, South Korea, Taiwan, and Thailand, and countervailing duty investigations on subject imports from China, India, South Korea, and Taiwan. The Petitioner further urges the Commission to find that subject imports have caused material injury to domestic producers, and threaten further material injury going forward.

Respectfully submitted,

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