F. No. 6/24/2024 – DGTR Case No. AD (OI-22/2024) Government of India Ministry of Commerce & Industry Department of Commerce Directorate General of Trade Remedies 4th Floor, Jeevan Tara Building, 5, Parliament Street, New Delhi – 110001

Date: 15 October, 2024

To, All Interested Parties

Subject: Scope of the product under consideration (PUC) and the product control number (PCN) methodology in the Anti-Dumping Investigation concerning imports of "Liquid Epoxy Resin" from China PR, Korea RP, Saudi Arabia, Taiwan and Thailand.

- 1. The captioned investigation was initiated *vide* notification no. F. No. 6/24/2024-DGTR and dated June 29, 2024, wherein the product under consideration ("**PUC**") was defined in Section A of the notification and an excerpt of details of the PUC is provided below:
 - 3. The product under consideration in the present investigation is Liquid Epoxy Resins (LER). Liquid epoxy resins are recognized for their role as thermosetting resins, which, upon mixing with a hardening agent, form a material renowned for its corrosion and chemical resistance, with strong adhesive properties.
 - 4. Liquid epoxy resins are thermosetting polymers characterized by the presence of at least two epoxide groups, which are fundamental to the structure and reactivity of epoxy resins. The main chemical reaction for producing Liquid epoxy resins is the reaction between epichlorohydrin and bisphenol-A, in an alkaline medium and under controlled temperature conditions. Liquid epoxy resins exhibit very good mechanical, adhesive, dielectric, anti-corrosion & chemical resistive properties when combined with appropriate curing agents.
 - 5. Liquid epoxy resins can exist as low or high molecular weight pre-polymers. Due to the nature of its polymerization process, liquid epoxy resins typically exhibits a range of chain lengths, although high purity grades are attainable for specific applications, notably through distillation purification processes. Use of blending, additives and fillers is often referred to as formulating. The

product under consideration includes all types and grades of liquid epoxy resins, encompassing various molecular weights, viscosities, and curing times

- 6. Liquid epoxy resins are widely used as protective coatings, adhesives, construction & civil engineering, marine & underwater, electrical & electronics and composite applications.
- 7. The PUC is generally imported into India under HS Codes 3907.3010, and 3907.3090 of Schedule I of the Customs Tariff Act, 1975. However, it is possible that the subject goods may also be imported under other headings and therefore, the Customs tariff heading is indicative only and is not binding on the scope of the product. Import data from the DG Systems database has been assessed for the above tariff codes for the purposes of dumping and injury analyses.
- 2. The interested parties were granted an opportunity to present their comments on the scope of the PUC and propose PCNs, if required, within 30 days from the date of initiation of the investigation. The deadline was further extended to August 4, 2024.
- 3. The Authority has received comments on the scope of PUC from Nantong Xingchen Synthetic Material Co. Ltd., Siochem Plastics Co. Ltd., Kukdo Chemicals Co. Ltd., and Pidilite Industries Ltd. Based on these comments, the Authority held a PUC/PCN discussion with all interested parties on August 23, 2024.
- 4. The Authority notes that the Indian Paint Association and Aditya Birla Chemicals Thailand Ltd. did not file timely comments on the scope of the PUC and PCN methodology. However, the Authority has taken their comments into account.

Scope of PUC

- 5. Kukdo Chemicals Co. Ltd. argued that the scope of the PUC should be limited to liquid epoxy resins, and should therefore, exclude the following:
 - a. Semi-solid type epoxy resins
 - b. Epoxy resins produced by chemical reactions other than ones between epichlorohydrin and bisphenol A, such as bisphenol-F, Phenol novolac, or Cresol novolac
 - c. Epoxy resins produced through production processes other than the 'taffy process'
 - d. Liquid epoxy resins above the range of equivalent weight 300 g/eq.

- 6. Nantong Xingchen Synthetic Material Co. Ltd. and Siochem Plastics Co. Ltd argued that the following product types should be excluded from the scope of the PUC
 - a. Bisphenol F liquid epoxy resin
 - b. Bisphenol A semi-solid epoxy resin
 - c. Novolac epoxy resin
 - d. Brominated solvent epoxy resin
- 7. Pidilite Industries Ltd. argued that the Authority must define the scope of the PUC with reference to:
 - a. The unique CAS of the PUC covered in the product scope (CAS 25068-38-6 and EU's REACH regulations: CAS 1675-54-3), and
 - b. By mentioning that only unmodified LERs are covered in the product scope.
- 8. At the PUC/PCN discussion, the domestic industry clarified that:
 - a. The scope of the PUC is limited to liquid epoxy resin produced by the chemical reaction between BPA and ECH.
 - b. It does not include epoxy resins in solid, semi-solid, solution or waterborne form.
 - c. The EEW of LER is also limited to = < 300 g/eq.
 - d. The scope of the PUC also does not include blended and modified LERs.
 - e. LER can be produced through methods other than the 'taffy process' and the scope of the PUC should not be limited to the production process.
- 9. At the PUC/PCN discussion, the Indian Paint Association also argued that 'Next Generation water-based CED paint' should be excluded from the scope of the PUC on account of its higher particle size, and specialized end-use applications. However, it failed to provide any evidence of the same.
- 10. In view of the foregoing, the Authority does not find it appropriate to modify the product scope at the present stage. However, the Authority has found it appropriate to clarify the scope of the PUC as follows:

- 3. The product under consideration in the present investigation is Liquid Epoxy Resins. Liquid epoxy resins are recognized for their role as thermosetting resins, which, upon mixing with a hardening agent, form a material renowned for its corrosion and chemical resistance, with strong adhesive properties.
- 4. It is clarified that the scope of the PUC is limited to liquid epoxy resin produced by the chemical reaction between epichlorohydrin and bisphenol A, where the equivalent weight of LER is limited to =< 300 g/eq. It does not include epoxy resins in solid, semi-solid, solution or waterborne form. It also does not include blended and modified LERs, brominated solvent epoxy resin.
- 5. Liquid epoxy resins are thermosetting polymers characterized by the presence of at least two epoxide groups, which are fundamental to the structure and reactivity of epoxy resins. The main chemical reaction for producing Liquid epoxy resins is the reaction between epichlorohydrin and bisphenol-A, in an alkaline medium and under controlled temperature conditions. Liquid epoxy resins exhibit very good mechanical, adhesive, dielectric, anti-corrosion & chemical resistive properties when combined with appropriate curing agents.
- 6. Liquid epoxy resins can exist as low or high molecular weight pre-polymers. Due to the nature of its polymerization process, liquid epoxy resins typically exhibits a range of chain lengths, although high purity grades are attainable for specific applications, notably through distillation purification processes. Use of blending, additives and fillers is often referred to as formulating. The product under consideration includes all types and grades of liquid epoxy resins, encompassing various molecular weights, viscosities, and curing times
- 7. Liquid epoxy resins are widely used as protective coatings, adhesives, construction & civil engineering, marine & underwater, electrical & electronics and composite applications. 7.
- 8. The PUC is generally imported into India under HS Codes 3907.3010, and 3907.3090 of Schedule I of the Customs Tariff Act, 1975. However, it is possible that the subject goods may also be imported under other headings and therefore, the Customs tariff heading is indicative only and is not binding on the scope of the product. Import data from the DG Systems database has been assessed for the above tariff codes for the purposes of dumping and injury analyses

PCN Methodology

- 11. Pidilite Industries Ltd. has proposed a PCN methodology on the basis of the viscosity of the products. However, the Authority notes that Pidilite Industries Ltd. has provided no evidence to demonstrate the difference in cost and price of the PUC with varying viscosity.
- 12. Other interested parties had proposed PCN methodologies on the assumption of a broad scope of PUC. However, since the scope of the PUC has been clarified through the notification, the Authority does not find it appropriate to notify a PCN methodology in the present investigation.

Filing of Questionnaire Responses

- 13. All interested parties i.e., producers/exporters/importers/ users etc. are requested to file respective questionnaire responses within 15 days from the date of this notice.
- 14. As trade remedial investigations are time-bound in nature, no further extension of time will be granted in the captioned matter.
- 15. This issues with the approval of the Designated Authority.

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