

Denka Accelerates the Market Rollout of Styrene-Based Products Incorporating the Environmental Value of Chemical Recycling

With the launch of full-scale supply of “Refresh Polystyrene,” (*1) a product made from used polystyrene, by its subsidiary, Toyo Styrene Co., Ltd., Denka Company Limited (Head Office: Chuo-ku, Tokyo; President: Ikuo Ishida) will progressively expand its range of styrene-based products that incorporate circular attributes derived from chemical recycling at the Company and its Group companies.

The Denka Group is advancing the recycling of styrene materials under D-NODE (*2), its comprehensive brand for a styrene resource circulation system. As part of this initiative, Denka and Toyo Styrene are focusing their efforts on the monomerization chemical recycling business, in which used polystyrene is depolymerized into styrene monomers and recycled into new styrene products.

With the launch of full-scale supply of “Refresh Polystyrene” to the market, the Group will expand its range of styrene-based products that incorporate circular attributes based on the ISCC PLUS certified mass balance approach (*3).

With this development, in addition to polystyrene currently being sold, the Group will be able to allocate circular attributes to biaxially oriented polystyrene sheet (BOPS), a processed product made from polystyrene, food packaging sheets, and food containers manufactured by the consolidated subsidiary, DENKA Polymer Co., Ltd. This will enable customers to choose products that have environmental value while maintaining the same level of quality and performance.

Further, in accordance with customers’ needs, the Group will work to expand the areas in which such products are used, with a view to expanding into functional resins such as the SBC resin “CLEAREN®” (*4) and other product areas.

Through the market expansion of chemical recycling-derived products and the horizontal recycling of used styrene-based products, the Denka Group will continue to promote resource recycling of styrene materials and to meet society’s and customers’ requirements for reduction of environmental impact.

Under its purpose of “making the world a better place as specialists in chemistry,” Denka will continue to contribute to people’s lives and to society with chemistry we can be proud of on a global scale.

*1 “Refresh Polystyrene” is a registered trademark of Toyo Styrene Co., Ltd in Japan.

*2 “D-NODE” is a registered trademark of Denka Company Limited in Japan.

*3 The mass balance approach is a distribution management method whereby different materials (e.g., petroleum-derived materials and plastic waste-derived recycled materials) are mixed together, and their respective properties are assigned to parts of the product according to the respective volumes of the materials loaded.

*4 “CLEAREN” is a registered trademark of Denka Company Limited.

[References: Past related press releases (Denka official website)]

- March 19, 2024: “Denka Launches Japan’s Largest Polystyrene Chemical Recycling Plant in Cooperation with Governments”

https://www.denka.co.jp/eng/storage/news/pdf/488/20240411_denka_ps_chemical_recycle_en.pdf

- May 29, 2024: “Denka Concludes Business Partnership Agreement with Ichihara City, Chiba Prefecture, Regarding Collection of Used Polystyrene from City Locations for the Operation of Polystyrene Chemical Recycling Plant” (Japanese only)

https://www.denka.co.jp/storage/news/pdf/1234/20240529_denka_ps_chemical_recycle.pdf

- June 24, 2024: “The acquisition of International Sustainable Carbon Certification ISCC PLUS Certification by Our Company and Our Group Companies”

https://www.denka.co.jp/eng/storage/news/pdf/500/20240624_denka.Isccplus_en.pdf

- April 7, 2025: “D-NODE™ Brand, Resource Circulation System for Styrene Materials”

https://www.denka.co.jp/eng/storage/news/pdf/531/20250407_denkadnode_en_.pdf

- April 27, 2026: “Denka Begins Collection and Chemical Recycling of Used Yakult Containers at Large Shopping Mall in Ichihara City, Chiba Prefecture”

https://www.denka.co.jp/storage/news/pdf/1398/20260427_denka_scr.pdf

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