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SABIC'S NEW SUSTAINABLE LNP™ COMPOUND WILL ADD TO 400 MILLION DIVERTED WATER BOTTLES AND DELIVER THIN-WALL, NON-BR/CL FLAME RETARDANCE TO 0.4 MM FOR ELECTRICAL INDUSTRY

SABIC, a global leader in the chemical industry, today launched LNP™ ELCRIN™ WF0051iQ compound featuring thin-wall, non-brominated/non-chlorinated flame retardance (FR). It is the newest addition to the company's growing family of sustainable iQ resins and it is well suited for electrical applications. The new grade will increase SABIC's already significant diversion of post-consumer polyethylene terephthalate (PET) water bottles, which are chemically upcycled into polybutylene terephthalate (PBT) resin. At the end of 2022, the company had already diverted 400 million 0.5-liter bottles through its iQ upcycling technology.

"LNP ELCRIN WF0051iQ compound can offer the electrical industry a novel solution that can significantly improve sustainability while delivering tailored performance properties that are essential for ever-smaller and more-powerful components," said Joshua Chiaw, Director, Business Management, LNP & NORYL, Specialties, SABIC. "This portfolio expansion has the potential to help accelerate the diversion of discarded, single-use water bottles to avoid landfilling and ocean contamination. Chemical upcycling is an important part of our overall net-zero strategy."

Smaller Carbon Footprint

Compared to standard, fossil-based virgin PBT resin, LNP ELCRIN WF0051iQ compound's carbon footprint is 11 percent less.¹ This reduction is due, primarily, to the incorporation of 39 0.5-liter PET water bottles in each kilogram of LNP ELCRIN WF0051iQ compound, representing a minimum of 27 percent of the content. SCS Global Services (SCS) has audited and provided independent verification that the manufacturing processes for LNP ELCRIN iQ compounded resins adhere to the SCS Recycled Content Standard, and that the supply chain meets criteria for responsible sourcing including social, environmental, health and safety requirements (Certified Green Products Guide | SCS Global Services). This process conserves natural resources.

Beyond the reuse of waste plastic, LNP ELCRIN WF0051iQ compound can offer additional sustainability benefits. For example, the ability to design thin walls with this compound helps reduce the consumption of fossil-based raw materials, and the FR formulation helps avoid the use of bromine and chlorine, two semi-volatile organic compounds that are linked to health and environmental risks.

The desirable combination of thin-wall FR, long-term property retention and glass fiber reinforcement for stiffness and high flow to enable complex geometries makes LNP ELCRIN WF0051iQ compound well suited for miniaturized electrical components such as connectors, switches and sockets. The product is available in custom colors.

High Performance for Electrical Applications

The new resin is the first LNP ELCRIN iQ compound to meet the UL94 V0 standard for fire resistance at 0.4 mm and has received a Yellow Card listing under the UL Plastics Recognition Program for the signature sustainability green color. The material's relative thermal index (RTI) is 130°C at 0.4 mm, and the comparative tracking index (CTI) is 2, contributing to safety and reduced material requirements that can lower the cost of tooling and accelerate time to market. Complementing these exceptional performance properties are many processability benefits, including high flow for fast throughput, and low abrasion properties, compared to alternatives.

"With our cross-functional expertise, we fast-tracked the development of this novel thin-wall, non-Br/Cl Flame retardant LNP ELCRIN WF0051iQ compound in order to extend the sustainability benefits of this unique resin family to more customers as soon as possible," said Luc Govaerts, Technology Director, Specialties, SABIC. "This effort underscores our strong commitment to meeting the needs of the electrical industry for specialized materials to enable new designs and advanced technologies."

In addition to electrical components, LNP ELCRIN WF0051iQ compound is well suited for use in critical medical devices and appliance applications. This material is globally available.

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¹ Based on internal assessment following the general principles of life cycle assessment (LCA) and according to the ISO 14040/44 guideline, using SABIC specific and industry average estimates.

ABOUT SABIC

SABIC is a global diversified chemicals company, headquartered in Riyadh, Saudi Arabia. It manufactures on a global scale in the Americas, Europe, Middle East and Asia Pacific, making distinctly different kinds of products: chemicals, commodity and high performance plastics, agri-nutrients and metals.

SABIC supports its customers by identifying and developing opportunities in key end-use applications such as construction, medical devices, packaging, agri-nutrients, electrical and electronics, transportation and clean energy.

SABIC recorded a net profit of SR 16.53 billion (US\$ 4.41 billion) in 2022. Sales revenues for 2022 totaled SR 198.47 billion (US\$ 52.92 billion). Total assets stood at SR 313 billion (US\$ 83.46 billion) at the end of 2022. Production in 2022 stood at 61 million metric tons.

The company has more than 31,000 employees worldwide and operates in around 50 countries. Fostering innovation and a spirit of ingenuity, SABIC has 9,948 patents and pending applications, and has significant research resources with innovation hubs in five key geographies – USA, Europe, Middle East, South Asia and North Asia.