

PRESS RELEASE

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LNP AT 70: FULL OF ENERGY AND INNOVATION

The LNP™ product line, part of global leader of diversified chemicals SABIC and the company's foremost brand for engineering thermoplastics, this year celebrates 70 years of successful operation. A pioneer in compounding technologies, the LNP product brand has a string of important technological achievements behind it. "And scientists and technologists behind the LNP portfolio continue to push the limits of technical performance, solving new challenges on a regular basis, while remaining committed to provide unique offerings and help create value for our customers," said Joshua Chiaw, Director, Business Management, LNP, SABIC.

Today the LNP product line is one of the world's leading providers of innovative thermoplastic solutions across multiple industries. It has technologies that help address many important needs being voiced across industries, whether they be for light weighting in automotive, bio-compatibility in healthcare, flame retardance in electrical and electronics, or improved aesthetics in consumer products.

"The LNP portfolio focuses on key growth markets, but it is no simple follower," said Joshua. "We have also been instrumental in opening up new applications with a string of technical innovations over the years."

A product line with an impressive list of accomplishments to its name, the era of reinforced thermoplastics was launched when the first fully dispersed short fiber reinforced compounds were introduced in the 1960s. In the 1980s, patented pultruded long fiber reinforced technology was added to open the age of LFRTs. Earlier, in the 1970s, the world's first carbon fiber reinforced compounds were developed, in addition to the first statically conductive compounds. A year later EMI/RFI shielding compounds were launched and today the product line reflects important patents covering EMI/RFI shielding, in addition to several patents on wear resistance without the need for polytetrafluoroethylene (PTFE).

"But it's not just that: success involves a blend of technology push and market pull. Innovations will go nowhere if they don't meet a need. The LNP portfolio reflects a strong history of working closely with its customers to develop materials that meet their needs – and also showing customers that novel high-performance materials can sometimes meet a need they didn't even know they had. It then stays with the customer to fulfil that need through product development and into commercial realization," adds Joshua.

"Our focus on the LNP portfolio over the years has had a major impact on the way that high performance thermoplastics compounds have developed. I don't think any other compounder has shown the technical innovation that we have," said Darpan Parikh, Global Product Management Leader, LNP, SABIC.

The LNP portfolio is now also leveraging a broad palette of SABIC polycarbonate copolymers with exceptional properties for compounding. These copolymers are designed to offer unique value compared to general purpose polycarbonate and include resin portfolios with high heat resistance (XHT & CXT), low temperature ductility (EXL),

superior flow and ductility (HFD), prolonged resistance to UV exposure for outdoor applications (SLX), transparent flame retardancy at thin gage (CFR), and excellent flame, smoke and toxicity properties for mass transportation (FST).

Serving Multiple Global Markets

The LNP portfolio supports many industries, including consumer electronics, consumer & industrial, automotive, healthcare and mass transportations.

In consumer electronics, innovative LNP compounds and copolymers help to address developing trends in products such as mobile phones, tablets and notebooks, helping OEMs make such products thinner, lighter, stronger, with improved aesthetics and potentially lower system cost.

In general consumer and industrial applications, LNP's specialty compounding solutions help achieve functionality and address design challenges, providing products with higher strength, flame retardance, self-lubrication, electrical and thermal conductivity, EMI shielding – the list goes on.

Addressing the challenges faced by the automotive industry, LNP materials support the drive towards lower weight, higher performance, improved aesthetics and greater cost effectiveness. In under-the-hood, interior and exterior applications, LNP products have been developed specifically for applications that range from electronic housings, gears and pulleys, fuel system and transmissions components, through seating mechanisms, instrument panels, headlamp bezels and grilles, to mirror brackets and more.

In the healthcare industry, medical devices and the materials they are made from must withstand ever-increasing in-service demands, as designs become more complex and performance requirements and regulations evolve. LNP offers a broad range of materials for the healthcare industry, including materials that have been biocompatibility assessed to ISO 10993.

Compounding the Answer

First introduced in 1948, the LNP portfolio now features a range of product families that include LUBRICOMP™ lubricated compounds, LUBRILOY™ lubricated compounds based on alloy technology, THERMOCOMP™ reinforced compounds, THERMOTUF™ impact modified compounds, STAT-KON™ electrically conductive compounds, STAT-LOY™ anti-static compounds, VERTON™ long fiber-reinforced thermoplastics (LFRTs), FARADDEX™ EMI/RFI shielding compounds, KONDUIT™ thermally conductive compounds, and COLORCOMP™ custom-colored compounds. LNP compounds utilize over 30 base resins and more than 200 different fillers to achieve various effects.

The LNP portfolio is manufactured at sites all around the world, in North America (where it was founded, in Malvern, PA), South America, Europe, and Asia. Our product experts provide materials and technical services to customers with equally global operations. All are part of an integrated global delivery system that allows LNP products to reach global markets effectively.

Beyond the products, various product services help customers to operate faster and to be more agile. A fast formulation service, for example, and small-scale sampling that starts with batches as small as 25 kg.

Darpan concluded: “With LNP products, you get the complete package. To stay at the top for 70 years, it takes a lot of effort. The LNP portfolio has evolved since 1948 but its core focus has remained intact, to innovate and to provide high quality and customized solutions to address our customers’ needs. That’s why our motto is: ‘We Compound the Answer.’”

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ABOUT SABIC

SABIC is a global leader in diversified chemicals headquartered in Riyadh, Saudi Arabia. We manufacture 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.

We support our customers by identifying and developing opportunities in key end markets such as construction, medical devices, packaging, agri-nutrients, electrical and electronics, transportation and clean energy.

SABIC recorded a net profit of SR 18.4 billion (US\$ 4.9 billion) in 2017. Sales revenues for 2017 totaled SR 149.8 billion (US\$ 39.9 billion). Total assets stood at SR 322.5 billion (US\$ 86 billion) at the end of 2017. Production in 2017 stood at 71.2 million metric tons.

SABIC has more than 34,000 employees worldwide and operates in more than 50 countries. Fostering innovation and a spirit of ingenuity, we have 11,534 global patent filings, and have significant research resources with innovation hubs in five key geographies – USA, Europe, Middle East, South Asia and North Asia.

The Saudi Arabian government owns 70 percent of SABIC shares with the remaining 30 percent publicly traded on the Saudi stock exchange.

PHOTOS AND CAPTIONS



Scientists and technologists behind the LNP portfolio continue to push the limits of technical performance, solving new challenges on a regular basis, while remaining committed to provide unique offerings and help create value for our customers.

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