

# PRESS RELEASE

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## SABIC and Shanghai Shengguang Confirm Benefits of NORYL™, LEXAN™ Structural Foam for Medical Equipment

Collaboration demonstrates major benefits of structural foam for metal replacement: greater design freedom, up to 50 percent weight reduction, 30 percent lower system costs

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SABIC, a leader in thermoplastic technology, and Shanghai Shengguang, a leading Chinese plastics injection molder, have worked together to highlight the advantages of SABIC's NORYL™ and LEXAN™ structural foam solutions for metal replacement in large medical equipment components. More specifically, the collaboration between the two companies demonstrated that, compared to metal, SABIC's structural foam technologies can deliver far greater design freedom and up to 50 percent weight reduction. While virtually eliminating common secondary operations, such as machining and acid treatment before painting, these products can also help reduce system costs by up to 30 percent vs. metal.

SABIC and Shanghai Shengguang collaborated on a range of studies and in-depth analyses which enabled them to pick the optimum material for these types of applications. Focus areas included tooling, product design, structural foam molding compared to alternative processes, foaming ratios, mechanical performance, and resistance to harsh disinfectant chemicals used in healthcare settings.

"As Chinese healthcare OEMs increasingly demand newer, better technologies to achieve a competitive advantage in this highly dynamic market, SABIC's structural foam products are emerging as the materials of choice in a broadening range of demanding applications," said Kevin Deng, general manager assistant, Shanghai Shengguang. "Our healthcare customers deserve the very best and by enabling greater design innovation, cost control, manufacturing efficiencies and higher overall performance versus metal, these structural foam solutions give us powerful new options to help these customers succeed."

"Increasingly, we are seeing healthcare equipment OEMs in China take on the challenge of affordability," said Cathleen Hess, Healthcare Business leader, SABIC. "With this in mind, we work closely with our healthcare customers to help meet the need for more economical material solutions without sacrificing performance to support efficient care delivery. Our collaboration with Shanghai Shengguang to validate SABIC's structural foam materials for healthcare applications is opening up vast new opportunities for Chinese OEMs to drive down system costs while gaining valuable benefits that metal and other traditional materials simply cannot provide."

### **Moving Beyond Metal**

Metal replacement is a growing trend in the medical device industry for a number of reasons. Metal has been shown to limit the design freedom needed to create next-generation applications. Also, parts made with metal are heavy. Shipping heavier equipment increases carbon fuel emissions and can drive up shipping costs. Additionally, metal frequently requires costly secondary operations, such as machining and painting. Coupled with concerns about rising healthcare costs and stronger global competition, OEMs are calling for new material strategies to control these costs while at the same benefiting from greater design flexibility.

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SABIC's NORYL and LEXAN structural foam molded materials can address these needs. Not only are they a desirable replacement for metal, but they can also surpass the performance, aesthetics and design limitations of traditional injection molded resins. Components for large medical equipment such as imaging and anesthesia devices can benefit from structural foam materials by reducing flowability issues, unsightly sink marks and warpage.

NORYL structural foam is a non-halogenated flame-retardant material that features a lower density and better flow than LEXAN structural foam. It provides excellent dimensional stability, including low creep and water absorption, and excellent chemical resistance. LEXAN structural foam provides higher heat resistance and impact strength than the NORYL material, and can achieve UL-94 V0 compliance at lower thicknesses.

The two materials address the requirements of different components and can be used together to maximize metal replacement opportunities. For instance, with its lower density and high dimensional stability, NORYL structural foam can be suitable for equipment cover panels and housings, while LEXAN structural foam can be used for machine bases and structural supports due to its exceptional durability.

SABIC and Shanghai Shengguang are now collaborating with customers to provide design and processing optimization guidance using these materials.

SABIC's NORYL and LEXAN structural foam technologies are available globally.

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- High-resolution photos are available upon request.
- SABIC should be written in every instance in all uppercase.

## 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 17.84 billion (US\$ 4.76 billion) in 2016. Sales revenues for 2016 totalled SR 132.83 billion (US\$ 35.42 billion). Total assets stood at SR 316.89 billion (US\$ 84.5 billion) at the end of 2016. Production in 2016 stood at 72.7 million metric tons

SABIC has more than 40,000 employees worldwide and operates in more than 50 countries. Fostering innovation and a spirit of ingenuity, we have 12,077 global patent filings, and have significant research resources with innovation hubs in five key geographies – USA, Europe, Middle East, South East Asia and North East Asia.

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

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## PHOTO & CAPTION



### PHOTO DESCRIPTION:

SABIC, a leader in thermoplastic technology, and Shanghai Shengguang, a leading Chinese plastics injection molder, have worked together to highlight the advantages of SABIC's NORYL™ and LEXAN™ structural foam solutions for metal replacement in large medical equipment components. These materials can also surpass the performance, aesthetics and design limitations of traditional injection molded resins. Components for large medical equipment such as imaging and anesthesia devices can benefit from structural foam materials by reducing flowability issues, unsightly sink marks and warpage.