

HEALTHCARE

BENEFITS OF STRUCTURAL FOAM RESIN FOR METAL REPLACEMENT

MEDICAL EQUIPMENT



INDUSTRY

Patient Testing

KEY CHALLENGES

Meeting the need for more economical material solutions without sacrificing performance

PRODUCT

Large medical equipment components

SOLUTIONS

NORYL™ and LEXAN™ structural foam resins for metal replacement

CHALLENGES

Metal replacement is a growing trend in the medical device industry for a number of reasons:

- Metal can limit the design freedom needed to create next-generation applications
- Parts made with metal are heavy which can increase shipping costs as well as carbon fuel emissions
- 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 technologies to help control costs and provide greater design flexibility.

SOLUTION

Compared to metal, SABIC's NORYL™ and LEXAN™ structural foam molded materials 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.

SOLUTION (Continued)

NORYL and LEXAN structural foam materials can also provide better performance, aesthetics and design flexibility compared to traditional injection molded resins. Structural foam components for large medical equipment such as imaging and anesthesia devices, can have reduced flowability issues, sink marks and warpage.

NORYL structural foam resin is a non-halogenated flame-retardant material that features a lower density and better flow than LEXAN structural foam resin. It provides excellent dimensional stability, including low creep and water absorption, and excellent chemical resistance.

LEXAN structural foam resin 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 resin is a potential material for equipment cover panels and housings, while LEXAN structural foam resin can be considered for machine bases and structural supports due to its exceptional durability.

FURTHER INFORMATION

WEBSITES

www.sabic.com

CONTACT US

MIDDLE EAST AND AFRICA

T +966 (0) 1 225 8000
E info@sabic.com

AMERICAS

T 1 800 845 0600 (toll free)
T 1 713 430 2301
E productinquiries@sabic.com

EUROPE

T +31 164 292911
E webinquiries@sabic.com

ASIA PACIFIC

T +86 21 2037 8188
E asiaproductinquiries@sabic.com

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES ("SELLER") ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT.

Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with TM are trademarks of SABIC or its subsidiaries or affiliates.
© 2018 Saudi Basic Industries Corporation (SABIC). All Rights Reserved.