

High clarity and temperature stability for exciting designs

New product: ACRYLITE® Optical HT offers enhanced heat deflection temperature and excellent optical properties

- RöhM introduces a new, crystal clear special molding compound for increased continuous service temperature, which provides product designers with greater creative flexibility
- ACRYLITE® Optical HT combines excellent optical properties with enhanced heat deflection temperature, which makes it a durable material for the automotive and lighting industry
- The material has been granted UL RTI classification for continuous service temperatures of up to 105°C

With the new ACRYLITE® Optical HT, the Molding Compounds Business Unit of RöhM introduces a heat-resistant special molding compound providing the best possible optical quality, even at increased continuous service temperatures. With its balanced properties, it is the latest molding compound of RöhM's portfolio of branded polymethyl methacrylate (PMMA). ACRYLITE® Optical HT provides optical efficiency at the high standard of ACRYLITE® 8N, in combination with an increased heat deflection temperature similar to the ACRYLITE® Heatresist product family. In addition, the new special molding compound offers excellent weather resistance and durability which ACRYLITE® is known for. This new product provides innovative designers with advanced creative possibilities for automotive headlamps or luminaire components, which create a distinctive and vibrant appearance.

Light transmittance, temperature and UV resistance

The materials used in optical components for automotive headlamps, high-power floodlights or road lighting, are usually subject to high standards. However, new trends in product design increase the thermal requirements on the materials to be used even further. For example, the use of high-performance LEDs with simultaneously smaller component depths. Too often, increased heat deflection temperature is synonymous with loss of optical quality, even if such a loss is minimal. Not with ACRYLITE® Optical HT; it combines increased heat deflection temperature with excellent optical properties in one product.

Good processability and continuous service life

ACRYLITE® Optical HT is suitable for processing with all standard thermoplastic methods. The excellent flow properties are comparable to those of known basic molding compounds and allow the production of complex optical components.

"ACRYLITE® Optical HT was designed specifically for applications where high-performance LEDs are used," emphasizes Dr. Rüdiger Carloff, Project Manager at Innovation Management Methacrylates at RöhM, who has managed the product development. "It can resist temperatures up to 105°C. This is confirmed by the RTI rating according to the UL 746B standard. It is also perfectly suitable for lighting guides with extended light paths."

"We see plenty of potential uses for ACRYLITE® Optical HT in the automotive industry in particular," says Dr. Sivakumara Krishnamoorthy, Senior Product Manager Automotive in the Molding Compounds Business Unit at RöhM. "We believe that ACRYLITE® Optical HT provides an excellent material solution for long light guides and other demanding optical components of headlamps, which are all subject to high thermal stress."

Dr. René Kogler, Head of Product Management for Lighting, Extrusion, Optics at RöhM adds, "We responded to the market's demand for higher heat deflection temperature of optics to

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Press contact:

Thomas Kern
Global Communications
BU Molding Compounds

Deutsche-Telekom-Allee 9
64295 Darmstadt
Germany

T +49 6151 863-7154
thomas.kern@roehm.com
www.roehm.com

Press contact Americas:

Marc Tracey
Communications Lead, Americas

Roehm America LLC
299 Jefferson Road
Parsippany, NJ 07054

M +1 862.337.1270
marc.tracey@roehm.com

provide greater design flexibility for luminaires with ACRYLITE® Optical HT. 15°C increase in continuous service temperature compared to the current standard. This opens new doors in luminaire design without loss of clarity and transmittance. Customers can continue to rely on the established ACRYLITE® properties such as high UV and weather resistance as well as recyclability.”

Images



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ACRYLITE® Optical HT is particularly well suited in the automotive industry for LED headlight optics



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New ACRYLITE® Optical HT: Increased continuous service temperature compared to industry standard creates new opportunities for luminaire design

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With 3,500 employees and 15 production sites worldwide, Röhm is one of the world's leading manufacturers in the methacrylate business. The medium-sized company with branches in Germany, China, the USA, Russia, and South Africa has more than 80 years of experience in methacrylate chemistry and a strong technology platform. Our best-known brands include PLEXIGLAS®, ACRYLITE®, DEGALAN® and DEGAROUTE®. More information is available at www.roehm.com.

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