

Fakuma 2021, hall B5, booth B5-5401

Materials for innovative lighting design: PLEXIGLAS® molding compounds at Fakuma 2021

- **PLEXIGLAS® molded parts are proven in a multitude of lighting applications**
- **Material development in line with market development**
- **PLEXIGLAS® Optical HT PMMA special molding compound for the best optical quality at high continuous service temperatures**

In general, the requirements are high for materials that are used for optical components in luminaires, high-power floodlights or streetlights. PLEXIGLAS® molding compounds from Röhm GmbH have been proven for use in lighting applications and are keeping pace with technological advancements. However, the requirements are increasing in line with many trends in product design, such as low component depths in combination with ever more powerful LEDs. Between October 12 and 16, the Molding Compounds business unit from Röhm will present its diverse portfolio for the lighting industry, as well as a new special molding compound for high-performance LEDs at the Fakuma 2021 trade fair in Friedrichshafen, in hall B5, booth B5-5401.

PLEXIGLAS® Optical HT combines high heat deflection temperatures with optical quality

At Fakuma 2021, Röhm will present one of its newest special molding compounds at a trade fair for the first time. PLEXIGLAS® Optical HT was specifically developed for use with high-performance LEDs. Its balanced properties mean the special molding compound provides the best possible optical quality, even at increased continuous service temperatures. "With PLEXIGLAS® Optical HT, we have met the market demands for greater heat deflection in optics to increase the freedom of design for luminaires: Our product can be used at continuous service temperatures that are 15° C higher than the industry standard, thereby opening up new opportunities in light design, all without losses in clarity and transmittance level," says René Kogler, Head of Product Management for Lighting, Extrusion, Optics at Röhm.

PLEXIMID® TT50 HF, a polymethyl methacrylimide (PMMI) from Röhm, is another special molding compound that has increased flow capability at higher temperature ranges. This ensures it has an even more precise mold surface reproduction than the previous product, PLEXIMID® TT50 and is ideal for very fine structures.

PLEXIGLAS® and light: a successful combination

The brand polymethyl methacrylate (PMMA) from Röhm has long been the ideal product for innovative lighting technology thanks to its extraordinary light-guiding properties. PLEXIGLAS® molding compounds can be used to produce both completely transparent covers, as well as covers with light-guiding structures and those that scatter light for a broad range of purposes.

Visitors to the booth can see the different light-guiding properties for themselves. Components for edge lighting made from PLEXIGLAS® LED LD molding compounds appear crystal-clear and transparent when the lights are not illuminated. The special material formulation means no additional scattering films or microstructures need to be applied to the component surfaces to ensure even light extraction over the entire surface, or even across extended distances.

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Special molding compounds for backlighting, contrastingly, hide the light source behind the cover. Depending on the application, there are many variants available with a wide range of scattering properties; from light to strong. These different grades allow the distance between the light source and the light-scattering cover to be varied. With the heavily light-scattering variants it is possible to realize even lighting without any visible differences in brightness, known as light hot spots, even at low installation depths.

Moreover, all PLEXIGLAS® molding compounds can be processed using both the injection molding and extrusion procedures. Depending on the product type, they fulfill various lighting requirements, including those required for manufacturing optics with thick walls, or high flow capabilities for the precise reproduction of fine surface structures.

PLEXIGLAS® molding compounds are durable

“In addition to the light-guiding requirements, the mega trend of sustainability poses further challenges for material manufacturers,” says Siamak Djafarian, Head of the Molding Compounds business unit at Röhm. “Our PLEXIGLAS® molding compounds are ‘sustainable by design’. This means that the extraordinary weather resistance properties ensure that the optics and covers retain their good optical properties and colorfastness for many years, thereby contributing to saving resources.

[Picture]



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About Röhm

With 3,500 employees and 15 production sites worldwide, Röhm is one of the 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®, MERACRYL™, DEGALAN®, DEGAROUTE® and CYROLITE®.

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