

Light design with the circular economy in mind

ACRYLITE® promotes sustainable product design of Olisq luminaires from TRILUX

- **With its new Olisq series of luminaires, TRILUX effectively implements the demands of the Ecodesign Directive**
- **ACRYLITE® incorporates the highest optical quality, offers outstanding longevity and is fully recyclable**
- **Diffusers made of ACRYLITE® molding compounds contain up to 40 percent recycled material**

When providing contemporary illumination for public buildings and offices, the aim is to brighten rooms in line with current standards while using as little energy as possible and blending in with the surrounding architecture. Moreover, public tenders for construction projects are increasingly calling for installed luminaires to comply with the Ecodesign Directive, which includes the requirement that luminaires can be repaired by replacing defective parts. Equally, all components of the luminaire must be reusable at the end of their service life, in keeping with the principles of the circular economy.

TRILUX, the market leader for professional lighting solutions in Germany, integrated the sustainability principle into the design of its Olisq luminaire series in the greatest detail. ACRYLITE®, the brand polymethyl methacrylate (PMMA) from Röhm in the Americas, is the material used for the luminaire diffuser and thus contributes significantly to sustainable product design. Alongside its proven optical properties, TRILUX chose the material due to its longevity and recyclability.

A luminaire range to suit all needs

Olisq is a functional luminaire designed for public buildings such as educational and health care facilities, production sites or office buildings. With its puristic, geometric design, it blends into every style of architecture and provides an attractive ambiance thanks to its excellent and homogeneous light. The series comprises three designs and nine sizes, making it easy for light planners to design entrances, rooms and corridors throughout the entire building. TRILUX will launch the first of the series, the round Olisq R, in early November 2022, followed in 2023 by square and rectangular versions.

In the standard design, the tray is made of ACRYLITE® 7H molding compound. "This version is ideally suited for the extrusion of optical components and, compared to ACRYLITE® 7N, features an improved stress crack resistance at identical heat deflection temperatures," explains Christian Bitsch, Senior Market Tech Consulting Manager in the Molding Compounds business unit at Röhm. TRILUX also produces a version made of impact-modified ACRYLITE® Resist zk40 for areas where an increased impact resistance would be appropriate, for example as part of safety considerations in school hallways and sports facilities, or as protection against vandalism in stairwells of parking garages.

TRILUX has been using the brand PMMA from Röhm for decades and values its very good light transmission and reflection levels, which allow it to create the desired light quality for all applications. "ACRYLITE® provides consistent quality and satisfies the increasingly stringent requirements placed on light quality, energy efficiency and sustainability when illuminating buildings," emphasizes Inga Keur, Product Manager Wall and Ceiling Luminaires at TRILUX.

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Sustainability as a design principle

Alongside the optical qualities, ecological aspects are also becoming ever more important in luminaire design. According to TRILUX, Olisq has a long service life of up to 100,000 hours (L80) and is extremely energy efficient with a luminous efficiency of up to 140 lm/W. Moreover, its design has been optimized in order to use as few materials as possible.

First of all, the luminaire manufacturer extrudes sheets made of ACRYLITE® molding compounds and then forms them into round, square and rectangular trays in a thermoplastic process. To prevent any of the raw material being wasted, all cuttings accumulated during production are ground up and returned to the production process. “The diffusers can contain up to 40 percent ground material. And some of the ground PMMA material comes from other TRILUX series in which the material is used,” explains Sebastian Dombrowski from Project Management Manufacturing Engineering at TRILUX.

For Sven Schröbel, Head of Global Sustainability Management in the Molding Compounds business unit at Röhm, this is a pioneering example of the brand plastic’s potential in the circular economy. “ACRYLITE® is sustainable by design. Firstly, because of its longevity in use. And secondly, because, it is fully recyclable – with virtually the same product quality. This is underscored by the high share of recycled material in sophisticated optical components, such as the diffuser of the Olisq luminaire.”

“Huge recycling potential”

“We have already sold millions of luminaires from previous models of the Olisq series over the years, all with trays made of ACRYLITE®, so there is huge untapped recycling potential here,” Dombrowski says. When developing the new series of luminaires, the designers even added a new feature to make them more user-friendly: Because the drilling and feed points match, it is possible to replace aging 740.N luminaires and various other makes with contemporary Olisq luminaires on a one-for-one basis when refurbishing buildings, without any need to drill new holes or lay new cables.

And Olisq itself is incredibly sustainable due to the ease with which it can be maintained and repaired: All parts can be mounted, removed and replaced individually without any tools. “And, at the end of its product life cycle, all its components can be separated with other same-type materials and fed to the corresponding materials cycles. ACRYLITE® is easy to recycle and satisfies this requirement,” Keur emphasizes. As such, Olisq not only complies with the Ecodesign Directive and the eligibility requirements – it also provides the user with a solution that remains cost efficient in the long term.

[Pictures]



Lighting solution in line with the Ecodesign Directive: The luminaires in the new Olisq series from TRILUX with trays made of ACRYLITE® molding compounds – in this image, the round Olisq R, which will be launched on November 1, 2022 – are extremely energy efficient, easy to repair and feature a material-saving design. The tray contains up to 40 percent recycled ACRYLITE®.

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Whether square or round: With its puristic, geometric design, Olisq blends into every style of architecture. TRILUX values ACRYLITE®, the brand PMMA from Röhm, as a material for its diffusers because of its very good light transmission and reflection levels, which allow it to create the desired light quality for all applications.

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Contemporary and sustainable: At the end of its product life cycle, all the components in the Olisq luminaire from TRILUX can be separated with other same-type materials and fed into the corresponding materials cycles. The tray made of ACRYLITE® is fully recyclable.
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Olisq from TRILUX as a wall-mounted luminaire: The luminaires of this series, with diffusers made of ACRYLITE® molding compounds, spread a bright, absolutely homogeneous and glare-free light.
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About Röhm

With 3,500 employees and 13 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, Mexico, 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®.

Polymethyl methacrylate (PMMA) products from Röhm are sold in the Americas under the registered trademarks ACRYLITE® and ACRYMID®, on the European, Asian, African and Australian continent under the registered trademarks PLEXIGLAS® and PLEXIMID®.

More information is available at www.roehm.com.

About Trilux

TRILUX Simplify Your Light is the easiest way to obtain a tailored, energy-efficient and future-oriented lighting solution. Based in Arnsberg, Germany, TRILUX utilizes a broad portfolio of technologies and collaborates with efficient partners to this end. Alongside quality and cost efficiency, the company focuses on ease of planning and installation as well as user-friendliness.

More information is available at www.trilux.com.