

Evonik develops sustainable transparent polyamide for the optics industry

- Produced from 40 percent biomass
- CO₂ footprint halved
- TÜV certified

Essen/Marl. Evonik is adding a sustainable, high-performance molding compound to its range of transparent polyamides. TROGAMID® myCX eCO is produced partly from a bio-based monomer and entirely with renewable energy. This results in a 50 percent reduction in the footprint of the climate gas carbon dioxide compared to the qualitatively equivalent premium product produced on a petrochemical basis using conventional energy sources.

Sustainable and high quality

TROGAMID® myCX eCO is a high-purity microcrystalline high-performance polyamide specially optimized for the optics industry. The name eCO stands for "eliminate CO₂". On the one hand, this is achieved by replacing a petrochemical-based raw material with one based on biomass. By mass balance, this results in 40 percent bio-based raw material in the polymer. Secondly, only renewable energy is used in the production of the granules. This and the resulting halving of the carbon balance compared with the fossil-based product are confirmed by a certification from TÜV Rheinland. The analysis was prepared in accordance with ISO 14040 and ISO 14044 and includes the Cradle to Gate stage.

The sustainable manufacturing process in no way alters the outstanding properties of TROGAMID® myCX, which is well-known on the market, such as its excellent transparency of over 90 percent, outstanding mechanical properties, stress cracking resistance, and break resistance. TROGAMID® myCX eCO thus also ensures long durability and high safety of premium lenses or high-quality visors for ski and snowboard goggles, as well as excellent wearing comfort due to its low weight.

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Customized plastic materials

TROGAMID® stands for a product family of transparent polyamides that have been successfully used in the optical industry for over 20 years. The portfolio includes innovative high-performance plastics for lenses and frames as well as other materials, for example for UV protection or pole films for high-contrast vision.



Figure caption

TROGAMID® myCX eCO is made from 40 percent biomass and 100 percent renewable energy. These halve the greenhouse gases in its production.

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Company information

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €12.2 billion and an operating profit (adjusted EBITDA) of €1.91 billion in 2020. Evonik goes far beyond chemistry to create innovative, profitable and sustainable solutions for customers. More than 33,000 employees work together for a common purpose: We want to improve life today and tomorrow.

About Smart Materials

The Smart Materials division includes businesses with innovative materials that enable resource-saving solutions and replace conventional materials. They are the smart answer to the major challenges of our time: environment, energy efficiency, urbanization, mobility and health. The Smart Materials division generated sales of around €3.24 billion in 2020 with about 7,900 employees.

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