

MIDO 2018: Evonik introduces innovative plastics concepts that unite safety, function, and design in children's glasses

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Whether bio-based transparent polyamides or medically approved elastomers: using an example of children's glasses Evonik demonstrates its expertise in polymer design for the optical industry.

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They're lightweight, colorful, and absolutely safe: a cute pair of children's glasses that Evonik will be presenting at this year's MIDO Eyewear Show in Milan. A sophisticated combination of materials—TROGAMID® Terra, a transparent, microcrystalline biopolyamide, and VESTAMID® Care, a medically approved polyamide 12 elastomer—unites unlimited freedom in design with uncompromising safety and health.

“Our portfolio of high-performance plastics offers glasses manufacturers an innovative variety of materials geared toward today's trends in the optical industry—in terms of aspects like design, weight, or quality,” says Tina Huang from Evonik's Consumer Goods Market Segment.

Specialists in polymer design

The outer frame of the children's glasses is made of TROGAMID® Terra. This biopolymer is manufactured from up to 50 percent renewable raw materials, such as palm kernel and coconut oils. Its rigidity, low weight, and considerable resistance to abrasion, heat, and chemicals are what make the plastic so impressive.

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The inner frame and nose pads of these glasses were designed with VESTMID® Care ME, a polyether block amide (PEBA) that weighs very little and is unusually soft to the touch, which maximizes comfort for the wearer. “When we selected the materials, we switched over to a medical product class, because we also wanted the inner frame of the glasses to prevent injury and slippage—two properties that are especially important in

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children’s glasses,” says Eric Chen, General Manager from Chinese eyewear manufacturer Hwa Mao Optical (Xiamen).

Another grade of VESTAMID® Care ME is the material of choice for the temple elements. This high-performance plastic is hard enough for the glasses to sit well, yet at the same time feels pleasant against the skin. The material makes it possible to avoid the use of metal for connecting the temple arms to the front of the frame, and allows for child-appropriate temple designs that can be changed with very little effort. The use of a medically approved product class rules out the possibility of irritation or other allergic responses in sensitive children’s skin.

Its over 50 years of experience make Evonik a leader in the development and manufacture of high-performance plastics for a variety of applications. In addition to PA 12, PEBA, and PEEK, the specialty chemicals company also offers its “Terra” product line of biopolyamides, which closes the gap in the spectrum of polyamide properties that could previously be attained.

Cooperation of Evonik and Hwa Mao Optical (Xiamen)

This application was developed and implemented as part of a cooperation between Evonik and Hwa Mao Optical (Xiamen, China). Hwa Mao Optical (Xiamen) Co., Ltd., established in 1996, specializes in manufacturing a wide variety of eyewear products.



***Caption:** A partner for biobased, transparent polyamides or medically approved elastomers: Evonik uses a children's glasses concept as a platform to demonstrate its exceptional polymer design expertise for the optical industry.*

Learn more about Evonik's high-performance plastics for optical applications at our stand (G52, Hall 2) at MIDO, February 24 - 26, in Milan, Italy.

Learn more about HWA MAO OPTICAL (XIAMEN) co., at our stand (P26, Hall 3) at MIDO, February 24 - 26, in Milan, Italy.

Company information

Evonik is one of the world leaders in specialty chemicals. The focus on more specialty businesses, customer-orientated innovative prowess and a trustful and performance-oriented corporate culture form the heart of Evonik's corporate strategy. They are the lever for profitable growth and a sustained increase in the value of the company. Evonik benefits specifically from its customer proximity and leading market positions. Evonik is active in over 100 countries around the world with more than 35,000 employees. In fiscal 2016, the enterprise generated sales of around €12.7 billion and an operating profit (adjusted EBITDA) of about €2.165 billion.

About Resource Efficiency

The Resource Efficiency segment is led by Evonik Resource Efficiency GmbH and supplies high performance materials for environmentally friendly as well as energy-efficient systems to the automotive, paints & coatings, adhesives, construction, and many other industries. This segment employed about 9,000 employees, and generated sales of around €4.5 billion in 2016.

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