

Microcrystals Don't Miss the Chance

Just another prove for the commitment of Evonik to the optical industry as a reliable and innovative supplier: To further improve the economy and efficiency of the sunglass lens production at our customers, Evonik has optimized and extended its product portfolio for the optical industry with TROGAMID® myCX, the new premium optical TROGAMID® grade.

TROGAMID® myCX resin

TROGAMID® myCX is the only transparent microcrystalline polyamide on the market. It consists of micro-sized crystals embedded by a unique long-chain aliphatic polyamide and combines the beneficial properties of both, semicrystalline and amorphous resins. This is the reason for TROGAMID® myCX's outstanding chemical and physical properties, which translates into extremely high durability, safety and comfort of the sunglass lenses made from TROGAMID® myCX.

Technical data

Transmission Rate:	92%
Refractive Index:	1.516
Abbe Number:	52



- the novel **premium quality** grade of the TROGAMID® CX portfolio
- the only **micro-crystalline** optical polyamide available in the market
- offers **excellent optical properties**
- ensures **highest safety** in sunglass lenses
- allows the **combination with all** kind of frame materials
- results in **highest durability** of high quality sunglasses
- provides **highest comfort** because of very low weight
- **prevents from crack formation** through stress or chemical attack

TROGAMID® myCX films

Beside the resin, Evonik offers films based on TROGAMID® myCX. These films are crystal-clear and colorless. Due to their excellent optical properties they can be used for demanding applications like lamination and decoration of optical parts. They are available in 125µm and 400µm gauge. Other gauges can be supplied upon request.



Comparison of TROGAMID® myCX with amorphous polyamide

Beside the outstanding optical properties in terms of very high light transmission and superior color-fidelity, TROGAMID® myCX has excellent physical properties as well. The following two tests have been conducted to show the outstanding durability and unrivalled resistance against stress and chemical attacks of TROGAMID® myCX in comparison with an amorphous polyamide, which is also used for optical components.

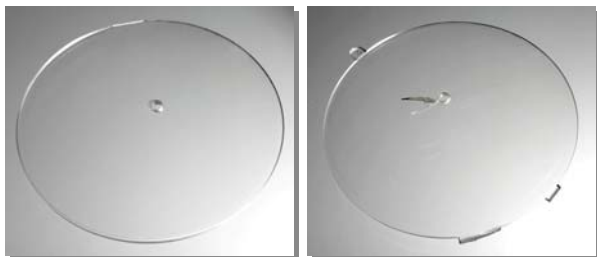
Drop test

TROGAMID® myCX was compared with an amorphous polyamide in a standardized drop test: Lenses of both materials with drilled wholes were hit by a dropping hammer (1.8 m dropping height, 880 g hammer weight, temperature 0 °C).

Result:

No cracks could be observed with lenses made from TROGAMID® myCX.

All lenses made from amorphous polyamide showed considerable cracks.



Example of a lens made from **TROGAMID® myCX** after exposure to the drop test at 0°C.

Example of a lens made from amorphous polyamide after exposure to the drop test at 0°C.



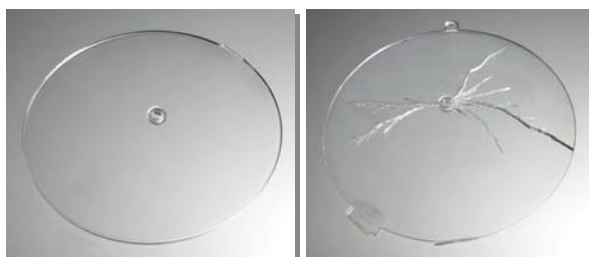
Solvent test

In a second test, lenses made from either polymer were exposed to stress through a screw driven into a drilled whole. Then they were dipped into the solvent Isopropanol for 10 minutes. Afterwards, lenses were analyzed for appearance of stress cracks.

Result:

No cracks and haze could be observed with lenses made from TROGAMID® myCX.

All lenses made from amorphous polyamide showed destructive stress cracks and haze.



Example of a lens made from **TROGAMID® myCX** after exposure to the solvent test.

Example of a lens made from amorphous polyamide after exposure to the solvent test.

As can be seen from the tests described above, optical components like sunglass lenses made from TROGAMID® myCX offer superior performance.

However, TROGAMID® myCX has much more to offer due to its unique formulation.
So: **Don't miss the chance to benefit from microcrystals!**

® = registered trademark

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