

Ultrason® E for headlight systems with elaborate design

Case Study

Hotter, lighter, faster – headlight systems used in the automotive sector are subject to increasingly stringent and in some cases, conflicting requirements. Increased road safety, lower fuel consumption and resistance to high temperatures must be integrated thoughtfully into modern designs. Polyethersulfone (PESU) Ultrason® E from BASF can withstand continuous exposure to temperatures of 180°C and for a brief time, even up to 220° C. The material is lightweight and easily metallized – ideal for use in headlights.

In addition, this high-temperature thermoplastic offers an interesting combination of advanced properties, which match the needs of this application precisely. These include its resistance to environmental influences such as exposure to moisture, and vibrational related stresses. The polyethersulfone is known specifically for its high dimensional heat stability which enables the production of complex and delicate geometries – crucial for linking together functionality and low-weight design in a cost-efficient manner. Thanks to its good demoldability, Ultrason® E can easily be removed from the injection mold.

The headlight reflector in the Hyundai ix35 made from Ultrason® E is not only highly functional but also elegant in design. In addition, it can continuously withstand high temperatures.

