

Automotive interior reflector made from Ultrason® E 2010 MR

Case Study

Let there be light!

For the reflector used in an automotive interior lighting application, the international automotive supplier Delphi has recently started to employ a high-performance plastic from BASF. After being injection molded, the complex and highly detailed part is metallized by means of physical vapor deposition (PVD), a process with demanding requirements for the plastic. The relatively new Ultrason® E 2010 MR is a polyether sulfone (PESU) characterized by its good mold release properties. The reflector is manufactured by Goletz GmbH, located in Kierspe (Germany, North Rhine-Westphalia).

For this small and complicated part, ease of demolding is especially important, since it could otherwise be removed from the injection mold only with difficulty or possibly even not at all. BASF has succeeded in combining a variety of properties in this material: it offers not only excellent mold release characteristics, but as a high-temperature material it also easily withstands a continuous service temperature of 180 °C, and briefly even 220 °C. Moreover, it exhibits very good adhesion to aluminum, the material with which it is metallized in this case. In addition, the plastic is also very transparent, allowing it to be used unmetallized as well. This makes it a candidate for fryer cover applications or other design-oriented household products where this combination of properties and good appearance are a requirement. Therefore, Ultrason® E 2010 MR also has the necessary approvals for food contact applications.

