

Case Study

Fuel filter housing made of Durethan® DP BCF 30 X H2.0



Fig. 1 Fuel filter housing

Maximum performance, long service life and low fuel consumption are essential requirements for a modern car engine.

To guarantee proper functioning of the injection systems for gasoline and diesel engines, high-quality fuel is vital. The primary task of the fuel filter is to filter out any solid inorganic or organic impurities present in the fuel.

For the manufacture of parts such as fuel filters, **MANN+HUMMEL** uses Durethan® DP BCF 30 X H2.0, a polyamide 6 reinforced with 30 % glass and carbon fibers.

Compared with the conventional metal design, the plastic filter housing offers a number of advantages, such as:

- A large processing window
- High dimensional accuracy
- Design freedom
- Weight savings

Material: Durethan® DP BCF 30 X H2.0

Manufacturer: MANN+HUMMEL

However, the disadvantage of plastics compared with metals is their low electrical conductivity, which can lead to the unwanted build-up of static on the filter while in service. Durethan® DP BCF 30 X H2.0 solves this problem. The carbon fiber content significantly increases the conductivity of the plastic.

Based on similar proven materials, Durethan® DP BCF 30 X H2.0 offers a range of properties that makes it ideal for the production of fuel filter housings and similar pressure-vessels:

- Enhanced electrical conductivity
- Good dynamic load resistance
- High strength
- Suitable for ultrasonic or friction welding
- Fuel resistance (also to new biofuels)
- Good surface quality

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