GRAFTALEN™ MP-UHHD 00850

Melt Processable Ultra-High-Molecular-Weight-Polyethylene based on High Density Polyethylene

Product Data

Description

GRAFTALEN™ MP-UHHD is a high performance polymer alloy, consisting of ultra-high molecular weight polyethylene and high density polyethylene. Its main characteristics are very high impact strength, which remains high even at low temperatures, and great flexural properties.

Typical Properties

The values indicated in this data sheet describe typical properties and do not constitute specification limits

Physical Characteristics	Value	Unit	Test Method
Density (21°C)	0,945	g/cm3	ASTM D792 / ISO 1183
MFI (230°C, 5 kg)*	8,1	g/10min	ISO 1133
Abrasion Resistance (72 rpm, 10 N)	3,6	mg/1000 cycles	ASTM D4060

*It may take a longer time to heat the material to desired temperature

Mechanical Characteristics	Value	Unit	Test Method
Hardness, Shore D	60	/	ASTM D2240
Tensile Strength at Yield (10 mm/min)	18,6±1,4	MPa	ISO 527-2 (Extrusion Molded)
Tensile Strength at Break (10 mm/min)	30±2,9	MPa	ISO 527-2 (Extrusion Molded)
Elongation at Break (10 mm/min)	368±33	%	ISO 527-2 (Extrusion Molded)
Charpy Impact Strength, Notched Sample:1eA (4J) @23°C	NB	kJ/m^2	ISO 179 (Extrusion Molded)
Charpy Impact Strength, Notched Sample: 1eA (4J) @-40°C	10±0,5	kJ/m^2	ISO 179 (Extrusion Molded)
Charpy Impact Strength, Unnotched Sample: 1eA (4J) @-40°C	NB	kJ/m^2	ISO 179 (Extrusion Molded)
Flexural Strength at max. load (2 mm/min)	25,6±0,3	MPa	ISO 178 (Extrusion Molded)
Flexural Elongation at max. load [mm] (2 mm/min)	5,7±0,2	mm	ISO 178 (Extrusion Molded)
Elastic Modulus (2 mm/min)	16,3±0,6	MPa	ISO 178 (Extrusion Molded)
Bend stress at 1,5xsample thickness (6 mm) (2 mm/min)	579±110	MPa	ISO 178 (Extrusion Molded)
Break Type	NB	/	ISO 178 (Extrusion Molded)

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Thermal Characteristics	Value	Unit	Test Method
Vicat Softening Temperature (10 N)	123	°C	ISO 306

Supplied as: Granulate

Applications

- GRAFTALEN™ MP-UHHD functions as a toughener,
- Improves mechanical characteristics,
- Increases abrasion resistance.

Processing

- GRAFTALEN™ MP-UHHD 00850 can be processed with all usual processing technologies (Injection moulding, extrusion, blow moulding, thermoforming...)
- Optimal processing temperatures are between 180°C and 200°C.

Special Features and Benefits

- Improves impact strength and impact resistance
- It can be used as modifier or as standalone material,
- Very high stiffness.

Storage and Transportation

MSDS provided to recommend safe practices during usage.
For easy handling and storage normally packed in 25 kg bags (50 bags per pallet).

Legal Statement

This product, including the product name, shall not be or tested in any medical application without the prior written acknowledgment of Graft Polymer d.o.o as to the intended use. For detailed product information, please contact Customer Service.

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