

Technical plastics: Polyethylene | Polypropylene (PE + PP)

Application

PE-HD for the production of tanks and structural parts in chemical and apparatus engineering

PE-UHMW ideal for durable structural parts

PP-F for parts production with high fire protection requirements

Properties

PE-HD has a high chemical resistance and is therefore ideally applicable in contact with salts, acids and solvents | continuous operating temperature +90 °C to -50 °C

PE-UHMW continuous operating temperature -200 °C up to +80 °C | very low water absorption

PP-H high chemical resistance | continuous operating temperature 0 °C to +100 °C

Storage

Dry in above zero conditions | Sheets can cause flatness problems due to internal tensions.

Processing

High cutting speed | low feed | observe good chip removal!

Welding

according to DIN 1910 part 3

Product range

We offer the above mentioned plastics as semi-finished products in various dimensions and thicknesses as sheets| solid rods



Properties	Values	
	PE-UHMW	PP-H
Density (g/cm ³)	0.94	0.90
Hardness (Shore Rockwell)	60	
Water absorption %	0.02	0.1
Melting temperature (°C)	+135	+165
Temperature range (°C)	approx. -150 ~ +80	+100
Breaking stress (MPa)	20	
Tensile strength (MPa)	45	45
Elongation (%)	15	33
Elongation at break (%)	>50	
Impact strength (kJ/m ²)	no break	no break
Impact toughness (kJ/m ²)	100	6
Ball-impression hardness (N/mm ²)	34	72
Plunger strength (kV/mm)	45	65
Volume resistivity (Ohm.cm)		>10 ¹⁴
Surface resistance (Ohm)	<10	10 ¹⁴
Dielectric constant (at 100 Hz)		2.3



Note: The technical parameters are a planning aid only. In particular, they do not represent guaranteed properties. The information in the data sheet is based on individual measurements and our current knowledge and experience. We reserve the right to make production-related changes.
Please note that the individual application conditions have an influence on the properties of each individual product. For this reason the customer is obliged to subject the materials to a suitability test. The use of our materials takes place exclusively within the area of responsibility of the user.