

GEHR Plastics PE-UHMW-ELS Polyethylene (discontinued **)

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), UHMW PE Ultra High Molecular Weight

Material Notes:

Polyethylene offers resistance to almost all acids and bases, detergents and hot water. PE has good insulation properties and is easy to weld. The operating temperature of HDPE is from -58 °F to +194 °F. Main Characteristics: light weight; high chemical resistance; high toughness (also at low temperature); good protection against stress cracking; high elongation; food safe; very good electrical and dielectric properties; soft surface (low tensile strength); HF welding not recommended; very low water absorption • difficult to varnish and glue; low steam permeability; not weather resistant. Information provided by GEHR Plastics, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PE-UHMW-ELS-Polyethylene-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.940 g/cc	0.940 g/cc	ISO 1183

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	38.0 MPa	5510 psi	ISO 2039
Tensile Strength at Break	30.0 MPa	4350 psi	ISO 527
Tensile Strength, Yield	17.0 MPa	2470 psi	ISO 527
Elongation at Break	>= 50 %	>= 50 %	ISO 527
Elongation at Yield	8.0 %	8.0 %	ISO 527
Modulus of Elasticity	0.800 GPa	116 ksi	ISO 527
Izod Impact, Unnotched (ISO)	NB	NB	ISO 179
Coefficient of Friction	0.18 @Temperature 60.0 °C	0.18 @Temperature 140 °F	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.400 W/m-K @Temperature 20.0 °C	2.78 BTU-in/hr-ft²-°F @Temperature 68.0 °F	DIN 52612
Maximum Service Temperature, Air	90.0 °C	194 °F	
Vicat Softening Point	76.0 °C	169 °F	VST/B/50; ISO 306
Minimum Service Temperature, Air	-150 °C	-238 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+6$ ohm-cm	$\geq 1.00\text{e}+6$ ohm-cm	VDE 0303
Surface Resistivity per Square	$1.00\text{e}+7$ ohm	$1.00\text{e}+7$ ohm	VDE 0303

Descriptive Properties	Value	Comments
Acid Resistance	Yes	
Aromatic Resistance	Limited	
Bondability	No	
CKW Resistance	No	
Hydrocarbonate Resistance	Yes	
Hydroxide Resistance	Yes	
Ketone Resistance	Yes	
Resistance to Hot Water	No	
UV Stabilization	Limited	

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