

## GEHR Plastics PE-ELSA® Polyethylene HDPE

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE

### Material Notes:

A variant of PE-HD with improved electrical conductivity. Polyethylene has a good chemical resistance against almost all acids and bases, detergents and hot water. PE has good insulation properties and is easy to weld. The operating temperature is from -50°C to 90°C. Properties: low density, high toughness, high elongation, very good electrical and dielectric properties, very low water absorption, low steam permeability, high chemical resistance, good protection against stress cracking, food safe, soft surface, HF welding not recommended, natural color is not weather resistance. Applications: Transport containers, pumps and valve parts, parts used in tank construction, components with medical applications, gaskets, sliding profiles, components for the food industry.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_GEHR-Plastics-PE-ELS-Polyethylene-HDPE.php](http://www.lookpolymers.com/polymer_GEHR-Plastics-PE-ELS-Polyethylene-HDPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.00 g/cc	1.00 g/cc	ISO 1183
Water Absorption	0.50 %	0.50 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	0.040 %	0.040 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	DIN 53505
Ball Indentation Hardness	55.0 MPa	7980 psi	ISO 2039
Tensile Strength at Break	10.0 MPa	1450 psi	ISO 527
Tensile Strength, Yield	29.0 MPa	4210 psi	ISO 527
Elongation at Break	55 %	55 %	ISO 527
Elongation at Yield	13 %	13 %	ISO 527
Modulus of Elasticity	1.36 GPa	197 ksi	ISO 527
Flexural Strength	24.0 MPa	3480 psi	3.5%; ISO 178
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	>= 0.500 J/cm <sup>2</sup>	>= 2.38 ft-lb/in <sup>2</sup>	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	150 µm/m-°C @Temperature 20.0 °C	83.3 µin/in-°F @Temperature 68.0 °F	DIN 53752

Melting Point Thermal Properties	190 Â°C Metric	374 Â°F English	DIN EN ISO 314 Comments
Maximum Service Temperature, Air	90.0 Â°C	194 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	69.0 Â°C	156 Â°F	ISO 75
Vicat Softening Point	83.0 Â°C	181 Â°F	VST/B/50; ISO 306
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 1.00e+6 ohm-cm	<= 1.00e+6 ohm-cm	IEC 60093
Surface Resistivity per Square	<= 1e+05	<= 1e+05	IEC 60093

Descriptive Properties	Value	Comments
Bondability	yes	
Color	Black	
UV Stabilization	limited	

## Contact Songhan Plastic Technology Co.,Ltd.

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