

Murtfeldt Original Material "S"® plus + GB Polyethylene, Glass Bead Filled

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

Material Notes:

The balanced quantity of micro glass beads in Material "S"® plus+ GB provides the combined benefits of extremely high molecular weight polyethylene and glass. The glass beads that protrude from the surface give a rounded and hard sliding surface. This material is used for applications that involve manufacturing and transportation at high pressure. Special Properties: • Protects the sliding partner • Extremely good resistance to chemicals • Approved for use in the food industry (EU and FDA) Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murtfeldt-Original-Material-S-plus-GB-Polyethylene-Glass-Bead-Filled.php

Physical Properties	Metric	English	Comments
Density	<= 0.940 g/cc	<= 0.0340 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	<= 0.010 %	<= 0.010 %	ISO 62
Water Absorption at Saturation	<= 0.010 %	<= 0.010 %	ISO 62
Molecular Weight	9.00e+6 g/mol	9.00e+6 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	65	65	DIN 53505
Ball Indentation Hardness	44.0 MPa	6380 psi	
Tensile Strength at Break	>= 29.0 MPa	>= 4210 psi	ISO 527
Tensile Strength	25.0 MPa	3630 psi	ISO 527
Elongation at Break	290 %	290 %	ISO 527
Modulus of Elasticity	0.700 GPa	102 ksi	
Compressive Yield Strength	9.50 MPa	1380 psi	ISO 604
	@Strain 1.00 %	@Strain 1.00 %	
	15.0 MPa	2180 psi	
	@Strain 2.00 %	@Strain 2.00 %	ISO 604
	24.0 MPa	3480 psi	ISO 604
	@Strain 5.00 %	@Strain 5.00 %	
Charpy Impact, Notched	>= 10.0 J/cm ²	>= 47.6 ft-lb/in ²	ISO 179
Coefficient of Friction, Dynamic	0.10 - 0.20	0.10 - 0.20	

Mechanical Properties	Metric	English	Comments
Sand Slurry	80	80	value in %

Thermal Properties	Metric	English	Comments
CTE, linear	170 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 23.0 - 60.0 $^{\circ}\text{C}$	94.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 73.4 - 140 $^{\circ}\text{F}$	
Thermal Conductivity	0.400 W/m-K	2.78 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ISO 52612
Melting Point	130 - 135 $^{\circ}\text{C}$	266 - 275 $^{\circ}\text{F}$	ISO 3146
Maximum Service Temperature, Air	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	Short Term
	80.0 $^{\circ}\text{C}$ @Time 1.80e+7 sec	176 $^{\circ}\text{F}$ @Time 5000 hour	
Minimum Service Temperature, Air	-200 $^{\circ}\text{C}$	-328 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	-120 $^{\circ}\text{C}$	-184 $^{\circ}\text{F}$	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+13$ ohm	$\geq 1.00\text{e}+13$ ohm	IEC 60093
Dielectric Strength	≤ 45.0 kV/mm	≤ 1140 kV/in	IEC 60243

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Light Green	

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