Murtfeldt Original Material "S"® Green Polyethylene

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

Material Notes:

Material "S"® is based on virgin, ultrahigh molecular weight low pressure polyethylene and significantly exceeds the requirements of DIN 16972. In particular, Material "S"® green has excellent slide properties, high wear resistance, and a long lifetime It is used in all applications where a technical, high performance plastic is required.Special Properties:• Extremely high wear resistance –even in abrasive applications•Excellent slide properties• High impact strength•Extremely good resistance to chemicals•Excellent shock and impact absorption•Good anti-adhesion properties•No moisture absorption•Electrically isolating•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-Green-Polyethylene.php

Physical Properties	Metric	English	Comments
Density	<= 0.930 g/cc	<= 0.0336 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	<= 0.010 %	<= 0.010 %	ISO 62
Water Absorption at Saturation	<= 0.010 %	<= 0.010 %	ISO 62
Molecular Weight	5.00e+6 g/mol	5.00e+6 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	DIN 53505
Ball Indentation Hardness	38.0 MPa	5510 psi	
Tensile Strength	20.4 MPa	2960 psi	ISO 527
Tensile Strength, Yield	>= 17.0 MPa	>= 2470 psi	ISO 527
Elongation at Break	380 %	380 %	ISO 527
Modulus of Elasticity	0.700 GPa	102 ksi	
Compressive Yield Strength	4.50 MPa @Strain 1.00 %	653 psi @Strain 1.00 %	ISO 604
	8.00 MPa @Strain 2.00 %	1160 psi @Strain 2.00 %	ISO 604
	14.0 MPa @Strain 5.00 %	2030 psi @Strain 5.00 %	ISO 604
Charpy Impact, Notched	>= 17.0 J/cm²	>= 80.9 ft-lb/in²	ISO 179

Mechanical Properties	Metric	English	Comments
Coefficient of Friction, Dynamic	0.10 - 0.20	0.10 - 0.20	
Sand Slurry	100	100	value in %

Thermal Properties	Metric	English	Comments
CTE, linear	200 µm/m-°C @Temperature 23.0 - 60.0 °C	111 µin/in-°F @Temperature 73.4 - 140 °F	
Thermal Conductivity	0.400 W/m-K	2.78 BTU-in/hr-ft²-°F	ISO 52612
Melting Point	130 - 135 °C	266 - 275 °F	ISO 3146
Maximum Service Temperature, Air	90.0 °C	194 °F	Short Term
	80.0 °C @Time 1.80e+7 sec	176 °F @Time 5000 hour	
Minimum Service Temperature, Air	-200 °C	-328 °F	
Glass Transition Temp, Tg	-120 °C	-184 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+13 ohm	>= 1.00e+13 ohm	IEC 60093
Dielectric Constant	2.1 @Frequency 100 Hz	2.1 @Frequency 100 Hz	IEC 60250
	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	<= 45.0 kV/mm	<= 1140 kV/in	IEC 60243
Dielectric Loss Index	0.00039 @Frequency 100 Hz	0.00039 @Frequency 100 Hz	IEC 60250

Compliance Properties	Metric	English	Comments
European Food 1935/2004	Yes	Yes	
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Green	

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