

Murtfeldt Original Material "S"® Black Antistatic Polyethylene, Conductive

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

Material Notes:

Original Material "S"® black has the same properties as Original Material "S"® green/natural. In addition, it is also electrostatically conductive due to the addition of additives. Special Properties:• Extremely high wear resistance – even in abrasive applications• Antistatic• Excellent slide properties• High impact strength• Very good resistance to chemicals• Excellent impact/shock resistance• Good anti-adhesion properties• No moisture absorption• Suitable for all devices and machines that are subject to Directive 94/9/EC (ATEX 95)Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murtfeldt-Original-Material-S-Black-Antistatic-Polyethylene-Conductive.php

Physical Properties	Metric	English	Comments
Density	<= 0.930 g/cc	<= 0.0336 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	<= 0.10 %	<= 0.10 %	ISO 62
Water Absorption at Saturation	<= 0.10 %	<= 0.10 %	ISO 62
Molecular Weight	5.00e+6 g/mol	5.00e+6 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	61 - 63	61 - 63	DIN 53505
Ball Indentation Hardness	38.0 MPa	5510 psi	
Tensile Strength	20.6 MPa	2990 psi	ISO 527
Tensile Strength, Yield	>= 17.0 MPa	>= 2470 psi	ISO 527
Elongation at Break	320 %	320 %	ISO 527
Modulus of Elasticity	0.700 GPa	102 ksi	
Compressive Yield Strength	5.00 MPa	725 psi	ISO 604
	@Strain 1.00 %	@Strain 1.00 %	
	9.00 MPa	1310 psi	ISO 604
	@Strain 2.00 %	@Strain 2.00 %	
	15.0 MPa	2180 psi	ISO 604
	@Strain 5.00 %	@Strain 5.00 %	
Charpy Impact, Notched	>= 12.0 J/cm²	>= 57.1 ft-lb/in²	ISO 179
Coefficient of Friction, Dynamic	0.10 - 0.20	0.10 - 0.20	

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	200 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 23.0 - 60.0 $^{\circ}\text{C}$	111 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @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	-150 $^{\circ}\text{C}$	-238 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	-120 $^{\circ}\text{C}$	-184 $^{\circ}\text{F}$	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\leq 1.00\text{e}+6$ ohm-cm	$\leq 1.00\text{e}+6$ ohm-cm	IEC 60093
Surface Resistance	$\leq 1.00\text{e}+9$ ohm	$\leq 1.00\text{e}+9$ ohm	IEC 60093

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

Descriptive Properties	Value	Comments
Color	Black	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China