

Murtfeldt Original Material "S"® plus + Bright ESD Polyethylene, Conductive

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

Material Notes:

Material "S"® plus+ Bright ESD is a light plastic with high conductivity and a voltage-dissipating effect on earthed components. This material is ideal for use in applications where a high value is placed on hygiene and antistatic characteristics. Special Properties: • Very good conductivity • Ideally suited to light, dust-free environments • Suitable for devices and machines 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-plus-Bright-ESD-Polyethylene-Conductive.php

Physical Properties	Metric	English	Comments
Density	<= 0.930 g/cc	<= 0.0336 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	5.00e+6 g/mol	5.00e+6 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	64	64	DIN 53505
Ball Indentation Hardness	38.0 MPa	5510 psi	
Tensile Strength at Break	25.0 MPa	3630 psi	ISO 527
Tensile Strength	21.6 MPa	3130 psi	ISO 527
Tensile Strength, Yield	>= 20.0 MPa	>= 2900 psi	ISO 527
Elongation at Break	225 %	225 %	ISO 527
Modulus of Elasticity	0.750 GPa	109 ksi	
Compressive Yield Strength	6.00 MPa	870 psi	ISO 604
	@Strain 1.00 %	@Strain 1.00 %	
	10.5 MPa	1520 psi	
	@Strain 2.00 %	@Strain 2.00 %	ISO 604
	18.0 MPa	2610 psi	ISO 604
	@Strain 5.00 %	@Strain 5.00 %	
Charpy Impact, Notched	>= 17.0 J/cm ²	>= 80.9 ft-lb/in ²	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 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	111 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 23.0 - 60.0 $^{\circ}\text{C}$	@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 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	
	@Time 1.80e+7 sec	@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	$\leq 1\text{e}+05$	$\leq 1\text{e}+05$	IEC 60093
Surface Resistance	$\leq 1\text{e}+05$	$\leq 1\text{e}+05$	IEC 60093

Compliance Properties	Metric	English	Comments
FDA	No	No	

Descriptive Properties	Value	Comments
Color	Light Grey	

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