

Murfeldt Original Material "S"® plus + AB Polyethylene, Antibacterial

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

Material Notes:

Material "S"® plus + AB contains special substances that prevent the growth of bacteria and other microbes. The material is thus ideally suited for use when manufacturing and processing foods. Special Properties: • Reduces bacteria and microbe growth by around 99.99% • Approved for use in the food industry (EU and FDA) • High wear resistance • Long lifetime • Good resistance to chemicals • Good acoustic insulation • No moisture absorption Information provided by Murfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murfeldt-Original-Material-S-plus-AB-Polyethylene-Antibacterial.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	20.3 MPa	2940 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	4.50 MPa	653 psi	ISO 604
	@Strain 1.00 %	@Strain 1.00 %	
	8.00 MPa	1160 psi	
	@Strain 2.00 %	@Strain 2.00 %	ISO 604
	14.0 MPa	2030 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	
Sand Slurry	100	100	value in %

Mechanical 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	-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	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ 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
European Food 1935/2004	Yes	Yes	
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Sky Blue	

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