

Alliance Polymers Zythane™ 6050D Thermoplastic Polyurethane Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane TPE

Material Notes:

Zythane™ 6050D is a polycaprolactone-based TPU specifically formulated for injection molding applications .It exhibits excellent low compression set, abrasion resistance and toughness and has good hydrolytic stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form. Availability: North America Features: Fuel Resistant, Good Toughness, Oil Resistant, Hydrolytically Stable, Solvent Resistant, Good Abrasion Resistance Appearance: Colorless Forms: Pellets Processing Method: Injection Molding Information provided by Alliance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Alliance-Polymers-Zythane-6050D-Thermoplastic-Polyurethane-Elastomer.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	ASTM D2240
Tensile Strength at Break	41.0 MPa	5950 psi	ASTM D412
Tensile Stress	14.0 MPa @Strain 100 %	2030 psi @Strain 100 %	ASTM D412
	27.0 MPa @Strain 300 %	3920 psi @Strain 300 %	ASTM D412
Elongation at Break	450 %	450 %	ASTM D412
Tear Strength	170 kN/m	971 pli	Die C; ASTM D412
Taber Abrasion, mg/1000 Cycles	50	50	ASTM D1044
Abrasion	23	23	mm ³ ; DIN 53516
Compression Set	33 % @Temperature 22.8 °C, Time 79200 sec	33 % @Temperature 73.0 °F, Time 22.0 hour	ASTM D3995B
	46 % @Temperature 70.0 °C, Time 259000 sec	46 % @Temperature 158 °F, Time 72.0 hour	ASTM D3995B

Thermal Properties	Metric	English	Comments
Vicat Softening Point	130 °C	266 °F	ASTM D1525

Brittleness Temperature Thermal Properties	-33.0 °C Metric	-27.4 °F English	ASTM D746 Comments
Flammability, UL94	HB	HB	
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Processing Temperature	210 - 220 °C	410 - 428 °F	Injection
Rear Barrel Temperature	195 °C	383 °F	Injection
Middle Barrel Temperature	205 °C	401 °F	Injection
Front Barrel Temperature	215 °C	419 °F	Injection
Nozzle Temperature	210 - 220 °C	410 - 428 °F	Injection
Mold Temperature	25.0 - 60.0 °C	77.0 - 140 °F	Injection
Injection Velocity	>= 10.0 mm/sec	>= 0.394 in/sec	Injection
Drying Temperature	90.0 °C	194 °F	Injection
Dry Time	4.00 hour	4.00 hour	Injection
Back Pressure	0.300 - 1.30 MPa	43.5 - 189 psi	Injection
Clamp Pressure	40.0 - 70.3 MPa	5800 - 10200 psi	Injection
Screw Speed	60 - 200 rpm	60 - 200 rpm	Injection

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