

Alliance Polymers Zythane™ 7055D Thermoplastic Polyurethane Elastomer

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

Material Notes:

Zythane™ 7055D 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 and Extrusion Information provided by Alliance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Alliance-Polymers-Zythane-7055D-Thermoplastic-Polyurethane-Elastomer.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	55	55	ASTM D2240
Tensile Strength at Break	50.0 MPa	7250 psi	ASTM D412
Tensile Stress	24.0 MPa	3480 psi	ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	38.0 MPa	5510 psi	ASTM D412
	@Strain 300 %	@Strain 300 %	
Tear Strength	200 kN/m	1140 pli	Die C; ASTM D412
Taber Abrasion, mg/1000 Cycles	53	53	ASTM D1044
Abrasion	28	28	mm ³ ; DIN 53516
Compression Set	38 %	38 %	ASTM D3995B
	@Temperature 22.8 °C, Time 79200 sec	@Temperature 73.0 °F, Time 22.0 hour	
Compression Set	48 %	48 %	ASTM D3995B
	@Temperature 70.0 °C, Time 259000 sec	@Temperature 158 °F, Time 72.0 hour	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	140 °C	284 °F	ASTM D1525

Brittleness Temperature Thermal Properties	-16.0 °C Metric	3.20 °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	215 °C	419 °F	Gate Temperature; Extrusion
	215 - 225 °C	419 - 437 °F	Injection
Rear Barrel Temperature	200 °C	392 °F	Injection
Middle Barrel Temperature	210 °C	410 °F	Injection
Front Barrel Temperature	220 °C	428 °F	Injection
Nozzle Temperature	215 - 225 °C	419 - 437 °F	Injection
Zone 1	200 °C	392 °F	Extrusion
Zone 2	210 °C	410 °F	Extrusion
Zone 3	220 °C	428 °F	Extrusion
Die Temperature	225 °C	437 °F	Extrusion
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
	90.0 °C	194 °F	Extrusion
Dry Time	4.00 hour	4.00 hour	Injection
	4.00 hour	4.00 hour	Extrusion
Back Pressure	0.600 - 1.40 MPa	87.0 - 203 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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