

Alliance Polymers Zythane™ 5070A Thermoplastic Polyurethane Elastomer

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

Material Notes:

Zythane™ 5070A 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 AmericaFeatures: Fuel Resistant, Good Toughness, Oil Resistant, Hydrolytically Stable, Solvent Resistant, Good Abrasion Resistance Appearance: ColorlessForms: PelletsProcessing Method: Injection Molding and ExtrusionInformation provided by Alliance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Alliance-Polymers-Zythane-5070A-Thermoplastic-Polyurethane-Elastomer.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in³	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	70	70	ASTM D2240
Tensile Strength at Break	30.0 MPa	4350 psi	ASTM D412
Tensile Stress	2.00 MPa	290 psi	ASTM D412
	@Strain 100 %	@Strain 100 %	
	6.00 MPa	870 psi	ASTM D412
	@Strain 300 %	@Strain 300 %	
Elongation at Break	750 %	750 %	ASTM D412
Tear Strength	40.0 kN/m	228 pli	Die C; ASTM D412
Taber Abrasion, mg/1000 Cycles	25	25	ASTM D1044
Abrasion	35	35	mm³; DIN 53516
Compression Set	12 %	12 %	ASTM D3995B
	@Temperature 22.8 °C, Time 79200 sec	@Temperature 73.0 °F, Time 22.0 hour	
	32 %	32 %	ASTM D3995B
	@Temperature 70.0 °C, Time 259000 sec	@Temperature 158 °F, Time 72.0 hour	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	80.0 °C	176 °F	ASTM D1525

Thermal Properties	Metric	English	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	195 °C	383 °F	Gate Temperature; Extrusion
	195 - 200 °C	383 - 392 °F	Injection
Rear Barrel Temperature	170 °C	338 °F	Injection
Middle Barrel Temperature	185 °C	365 °F	Injection
Front Barrel Temperature	200 °C	392 °F	Injection
Nozzle Temperature	200 - 205 °C	392 - 401 °F	Injection
Zone 1	165 °C	329 °F	Extrusion
Zone 2	180 °C	356 °F	Extrusion
Zone 3	195 °C	383 °F	Extrusion
Die Temperature	200 °C	392 °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	80.0 °C	176 °F	Injection
	85.0 °C	185 °F	Extrusion
Dry Time	4.00 hour	4.00 hour	Injection
	4.00 hour	4.00 hour	Extrusion
Back Pressure	0.500 - 1.00 MPa	72.5 - 145 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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