

Zythane® 5070A

Thermoplastic Polyurethane Elastomer (Polyester)

Alliance Polymers & Services

Message:

Zythane 5070A is a polyester--based TPU specifically formulated for extrusion applications. It exhibits excellent abrasion resistance and toughness and has good hydrolytic stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form.

Typical Applications:

Zythane 5070A applications include among others spiral and pneumatic tubing, round and V belting, blow molded bellows.

General Information	
Features	Solvent resistance
	Good wear resistance
	Fuel resistance
	Oil resistance
	Good toughness
	Hydrolysis stability
Uses	Pipe fittings
Appearance	Colorless
Forms	Particle
Processing Method	Blow molding
	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	25.0	mg	ASTM D1044
Abrasion - DIN	35	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	2.00	MPa	ASTM D412
300% strain	6.00	MPa	ASTM D412
Tensile Strength (Break)	30.0	MPa	ASTM D412
Tensile Elongation (Break)	750	%	ASTM D412
Tear Strength ¹	39.2	kN/m	ASTM D624
Compression Set			ASTM D395B
24°C, 22 hr	12	%	ASTM D395B
70°C, 72 hr	32	%	ASTM D395B

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-43.9	°C	DSC
Vicat Softening Temperature	75.0	°C	ASTM D1525
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.00 mm	HB		UL 94
1.50 mm	HB		UL 94
3.00 mm	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	4.0	hr	
Rear Temperature	195	°C	
Middle Temperature	185	°C	
Front Temperature	200	°C	
Nozzle Temperature	200 - 205	°C	
Processing (Melt) Temp	195 - 200	°C	
Mold Temperature	25.0 - 60.0	°C	
Back Pressure	0.500 - 1.00	MPa	
Screw Speed	60 - 200	rpm	
Clamp Tonnage	4.1 - 6.9	kN/cm ²	
Injection instructions			
Injection Speed: >.4 in/sec			
Extrusion	Nominal Value	Unit	
Drying Temperature	85.0	°C	
Drying Time	4.0	hr	
Cylinder Zone 1 Temp.	165	°C	
Cylinder Zone 2 Temp.	180	°C	
Cylinder Zone 3 Temp.	195	°C	
Die Temperature	200	°C	
Extrusion instructions			
Gate Temperature: 195°C (383°F)			
NOTE			
1.	C mould		

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