

Zythane® 7070A

Thermoplastic Polyurethane Elastomer (Polyether)

Alliance Polymers & Services

Message:

Zythane 7070A is a polyether--based TPU specifically formulated for extrusion applications with ease of processing. 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 7070A applications include among others FDA applications, cable sheathing, spiral and pneumatic tubing, film, irrigation hoses, conveyor hoses, fire hoses, hydraulic hoses, cable jacketing, flat flex cables, automotive sensor cables.

General Information	
Features	Solvent resistance
	Good wear resistance
	Fuel resistance
	Oil resistance
	Good toughness
	Hydrolysis stability
Uses	Cable sheath
	Pipe
	Pipe fittings
	Application in Automobile Field
Agency Ratings	FDA not rated
Appearance	Colorless
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	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	35.0	mg	ASTM D1044
Abrasion - DIN	28	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	3.00	MPa	ASTM D412
300% strain	6.00	MPa	ASTM D412
Tensile Strength (Break)	26.0	MPa	ASTM D412

Tensile Elongation (Break)	880	%	ASTM D412
Tear Strength ¹	73.6	kN/m	ASTM D624
Compression Set			ASTM D395B
24°C, 22 hr	20	%	ASTM D395B
70°C, 72 hr	35	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-53.9	°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	85.0	°C	
Drying Time	4.0	hr	
Rear Temperature	165	°C	
Middle Temperature	180	°C	
Front Temperature	195	°C	
Nozzle Temperature	195 - 200	°C	
Processing (Melt) Temp	190 - 195	°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	198	°C	
Extrusion instructions			
Gate Temperature: 195°C (383°F)			
NOTE			
1.	C mould		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

