



Zythane® 7075AW

Alliance Polymers & Services - Thermoplastic Polyurethane Elastomer (Polyether)

General Information

Product Description

Zythane 7075AW is a polyether---based non-halogenated FR TPU specifically formulated for both injection molding and extrusion applications with ease of processing. It exhibits excellent flame retardance, abrasion resistance and toughness and has good hydrolytic stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form.

Typical Applications

Zythane 7075AW applications include among others non-FDA applications, cable sheathing, spiral and pneumatic tubing, film, irrigation, conveyor hoses, fire hoses, hydraulic hoses, cable jacketing, flat flex cables, automotive sensor cables.

General

Features	<ul style="list-style-type: none"> • Abrasion Resistant • Flame Retardant • Fuel Resistant 	<ul style="list-style-type: none"> • Good Processability • Good Toughness • Halogen Free 	<ul style="list-style-type: none"> • Hydrolytically Stable • Oil Resistant • Solvent Resistant
Uses	<ul style="list-style-type: none"> • Automotive Applications • Cable Jacketing 	<ul style="list-style-type: none"> • Hose • Tubing 	
Appearance	<ul style="list-style-type: none"> • Colorless 		
Forms	<ul style="list-style-type: none"> • Pellets 		
Processing Method	<ul style="list-style-type: none"> • Extrusion 	<ul style="list-style-type: none"> • Injection Molding 	

Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.14		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	19.0	mg	ASTM D1044
Abrasion - DIN	21	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	725	psi	ASTM D412
Tensile Stress (300% Strain)	1740	psi	ASTM D412
Tensile Strength (Break)	6090	psi	ASTM D412
Tensile Elongation (Break)	700	%	ASTM D412
Tear Strength ²	336	lbf/in	ASTM D624
Compression Set			ASTM D395B
75°F, 22 hr	19	%	
158°F, 72 hr	44	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	75		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-54.0	°F	DSC
Vicat Softening Temperature	198	°F	ASTM D1525
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in		V-2	
0.12 in		V-2	
0.04 in		V-0	

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	185	°F
Drying Time	4.0	hr
Rear Temperature	338	°F
Middle Temperature	365	°F
Front Temperature	392	°F
Nozzle Temperature	392 to 401	°F
Processing (Melt) Temp	383 to 392	°F
Mold Temperature	77 to 140	°F
Back Pressure	72.5 to 145	psi
Screw Speed	60 to 200	rpm
Clamp Tonnage	3.0 to 5.0	tons/in ²

Injection Notes

Injection Speed: >.4 in/sec

Extrusion	Nominal Value	Unit
Drying Temperature	185	°F
Drying Time	4.0	hr
Cylinder Zone 1 Temp.	338	°F
Cylinder Zone 2 Temp.	365	°F
Cylinder Zone 3 Temp.	392	°F
Die Temperature	396	°F

Extrusion Notes

Gate Temperature: 200°C (392°F)

Notes

¹ Typical properties: these are not to be construed as specifications.

² Die C