



Zythane® 6070AU

Alliance Polymers & Services - Thermoplastic Polyurethane Elastomer (Polyether)

General Information

Product Description

Zythane 6070AU is a translucent UV-stabilized polyether-based TPU specifically formulated for injection molding applications. It exhibits excellent abrasion resistance and toughness and has good hydrolytic/UV stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form.

Typical Applications:

Zythane 6070AU applications include among others FDA applications, sports shoes, ski tips, other sporting goods, casters, power tools handles, good overmolded adhesion to certain EP (ex: PC, ABS, PMMA), cell phone cases, plugs, terminations, ski boot shell, animal tags, railroad pads.

General

Additive	• UV Stabilizer		
Features	• Abrasion Resistant • Fuel Resistant • Good Toughness	• Hydrolytically Stable • Oil Resistant • Solvent Resistant	• UV Resistant
Uses	• Cell Phones • Footwear	• Industrial Applications • Power/Other Tools	• Sporting Goods • Wheels/Casters
Agency Ratings	• FDA		
Appearance	• Colorless	• Translucent	
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.06		ASTM D792
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 (100% Strain)	1740	psi	ASTM D412
Tensile Stress (300% Strain)	2610	psi	ASTM D412
Tensile Strength (Break)	3630	psi	ASTM D412
Tensile Elongation (Break)	1000	%	ASTM D412
Tear Strength ²	252	lbf/in	ASTM D624
Compression Set			ASTM D395B
75°F, 22 hr	12	%	
158°F, 72 hr	30	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-67.0	°F	DSC
Vicat Softening Temperature	167	°F	ASTM D1525
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.04 in		HB	
0.06 in		HB	
0.12 in		HB	

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	185	°F
Drying Time	4.0	hr
Rear Temperature	329	°F
Middle Temperature	356	°F
Front Temperature	383	°F
Nozzle Temperature	383 to 392	°F
Processing (Melt) Temp	374 to 383	°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

Notes

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

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