

# Zythane® 7085AU

Thermoplastic Polyurethane Elastomer (Polyether)

Alliance Polymers & Services

Message:

Zythane 7085AU is a UV stabilized polyether--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 7085AU 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	1.12	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	85		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	28.0	mg	ASTM D1044
Abrasion - DIN	18	mm <sup>3</sup>	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	6.00	MPa	ASTM D412
300% strain	10.0	MPa	ASTM D412
Tensile Strength (Break)	37.0	MPa	ASTM D412

Tensile Elongation (Break)	550	%	ASTM D412
Tear Strength <sup>1</sup>	108	kN/m	ASTM D624
Compression Set			ASTM D395B
24°C, 22 hr	23	%	ASTM D395B
70°C, 72 hr	39	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-37.8	°C	DSC
Vicat Softening Temperature	105	°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	180	°C	
Middle Temperature	195	°C	
Front Temperature	200	°C	
Nozzle Temperature	200 - 215	°C	
Processing (Melt) Temp	205 - 210	°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 <sup>2</sup>	
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.	180	°C	
Cylinder Zone 2 Temp.	195	°C	
Cylinder Zone 3 Temp.	200	°C	
Die Temperature	208	°C	
Extrusion instructions			
Gate Temperature: 200°C (392°F)			
NOTE			
1.	C mould		

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