

# Zythane® 6085AU

Thermoplastic Polyurethane Elastomer (Polyether)

Alliance Polymers & Services

## Message:

Zythane 6085AU is a UV stabilized FDA 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 6085AU 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 Information	
Additive	UV stabilizer
Features	Solvent resistance
	Good UV resistance
	Good wear resistance
	Fuel resistance
	Oil resistance
	Good toughness
	Hydrolysis stability
Uses	Wheels
	Power/other tools
	Industrial application
	Mobile phone
	Sporting goods
	Footwear
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
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Brittleness Temperature	-37.8	°C	DSC
Vicat Softening Temperature	105	°C	ASTM D1525
<b>Flammability</b>	<b>Nominal Value</b>		<b>Test Method</b>
Flame Rating			UL 94
1.00 mm	HB		UL 94
1.50 mm	HB		UL 94
3.00 mm	HB		UL 94
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
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>	
<b>Injection instructions</b>			
Injection Speed: >.4 in/sec			
<b>Extrusion</b>	<b>Nominal Value</b>	<b>Unit</b>	
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	
<b>Extrusion instructions</b>			
Gate Temperature: 200°C (392°F)			
<b>NOTE</b>			
1.	C mould		

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