

# Zythane® 7055D

Thermoplastic Polyurethane Elastomer (Polyether)

Alliance Polymers & Services

## Message:

Zythane 7055D 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 7055D 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	1.16	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	55		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	353	mg	ASTM D1044
Abrasion - DIN	28	mm <sup>3</sup>	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% strain	24.0	MPa	ASTM D412
300% strain	38.0	MPa	ASTM D412
Tensile Strength (Break)	50.0	MPa	ASTM D412

Tensile Elongation (Break)	400	%	ASTM D412
Tear Strength <sup>1</sup>	196	kN/m	ASTM D624
Compression Set			ASTM D395B
24°C, 22 hr	38	%	ASTM D395B
70°C, 72 hr	48	%	ASTM D395B
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Brittleness Temperature	-16.1	°C	DSC
Vicat Softening Temperature	140	°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	90.0	°C	
Drying Time	4.0	hr	
Rear Temperature	200	°C	
Middle Temperature	210	°C	
Front Temperature	220	°C	
Nozzle Temperature	215 - 225	°C	
Processing (Melt) Temp	215 - 225	°C	
Mold Temperature	25.0 - 60.0	°C	
Back Pressure	0.600 - 1.40	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	90.0	°C	
Drying Time	4.0	hr	
Cylinder Zone 1 Temp.	200	°C	
Cylinder Zone 2 Temp.	210	°C	
Cylinder Zone 3 Temp.	220	°C	
Die Temperature	225	°C	
<b>Extrusion instructions</b>			
Gate Temperature: 215°C (419°F)			
<b>NOTE</b>			
1.	C mould		

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