

# Zythane® 3045D

## Alliance Polymers & Services - Thermoplastic Polyurethane Elastomer (Polycaprolactone)

### General Information

#### Product Description

Zythane 3045D is a polycaprolactone--based TPU specifically formulated for injection molding applications. It exhibits excellent lowcompression set, abrasion resistance and toughness and has good hydrolytic stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form.

Typical Applications:

Zythane 3045D application include hydraulic seals and other applications require good higher temp compression set.

#### General

Features	<ul style="list-style-type: none"> <li>• Abrasion Resistant</li> <li>• Fuel Resistant</li> <li>• Good Toughness</li> </ul>	<ul style="list-style-type: none"> <li>• Hydrolytically Stable</li> <li>• Low Compression Set</li> <li>• Oil Resistant</li> </ul>	<ul style="list-style-type: none"> <li>• Solvent Resistant</li> </ul>
Uses	<ul style="list-style-type: none"> <li>• Seals</li> </ul>		
Appearance	<ul style="list-style-type: none"> <li>• Colorless</li> </ul>		
Forms	<ul style="list-style-type: none"> <li>• Pellets</li> </ul>		
Processing Method	<ul style="list-style-type: none"> <li>• Injection Molding</li> </ul>		

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	48.0	mg	ASTM D1044
Abrasion - DIN	44	mm <sup>3</sup>	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	2030	psi	ASTM D412
Tensile Stress (300% Strain)	4500	psi	ASTM D412
Tensile Strength (Break)	7400	psi	ASTM D412
Tensile Elongation (Break)	450	%	ASTM D412
Tear Strength <sup>2</sup>	812	lbf/in	ASTM D624
Compression Set			ASTM D395B
75°F, 22 hr	12	%	
1458°F, 72 hr	17	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	95		
Shore D	45		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-13.0	°F	DSC
Vicat Softening Temperature	284	°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	