

Zythane® 4065D

Alliance Polymers & Services - Thermoplastic Polyurethane Elastomer (Polyester)

General Information

Product Description

Zythane 4065D is a polyester-based TPU specifically formulated for injection molding 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 Application:

Zythane 4065D applications include among others shoe soles, ski and skate boot shells, other sporting goods, caster wheels, animal tags, good overmolded adhesion to certain EP (ex: PC, ABS, PMMA), couplings, gaskets and seals, tool handles, industrial parts, mobile phone cases, armrests, golf disks, mining screens.

General

Features	<ul style="list-style-type: none"> • Abrasion Resistant • Fuel Resistant 	<ul style="list-style-type: none"> • Good Toughness • Hydrolytically Stable 	<ul style="list-style-type: none"> • Oil Resistant • Solvent Resistant
Uses	<ul style="list-style-type: none"> • Automotive Interior Parts • Cell Phones • Footwear 	<ul style="list-style-type: none"> • Gaskets • Industrial Applications • Power/Other Tools 	<ul style="list-style-type: none"> • Seals • Sporting Goods • Wheels/Casters
Appearance	<ul style="list-style-type: none"> • Colorless 		
Forms	<ul style="list-style-type: none"> • Pellets 		
Processing Method	<ul style="list-style-type: none"> • Injection Molding 		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.23		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance	45.0	mg	ASTM D1044
Abrasion - DIN	50	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	2900	psi	ASTM D412
Tensile Stress (300% Strain)	5800	psi	ASTM D412
Tensile Strength (Break)	7980	psi	ASTM D412
Tensile Elongation (Break)	340	%	ASTM D412
Tear Strength ²	784	lbf/in	ASTM D624
Compression Set			ASTM D395B
75°F, 22 hr	38	%	
158°F, 72 hr	48	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	64		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	23.0	°F	DSC
Vicat Softening Temperature	324	°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	

Zythane® 4065D

Alliance Polymers & Services - Thermoplastic Polyurethane Elastomer (Polyester)

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	194	°F
Drying Time	4.0	hr
Rear Temperature	401	°F
Middle Temperature	419	°F
Front Temperature	437	°F
Nozzle Temperature	428 to 446	°F
Processing (Melt) Temp	428 to 446	°F
Mold Temperature	95 to 158	°F
Back Pressure	87.0 to 203	psi
Screw Speed	60 to 200	rpm
Clamp Tonnage	4.0 to 7.0	tons/in ²

Injection Notes

Injection Speed: >.4 in/sec

Notes

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

² Die C