

# ISOTHANE® 5090A

Thermoplastic Polyurethane Elastomer (Polyether)

Great Eastern Resins Industrial Co Ltd (GRECO)

Message:

ISOTHANE 5090A product is an 90A, polyether based thermoplastic Polyurethanes. It exhibits excellent bio-compatibility, hydrolytic resistance, fungus resistance and low temperature performance properties. It can be injection molded, blow molded, and extruded. This product is used for biomedical and drug administration applications.

Suggested Applications:

Wound Dressing, Trans-dermal Patches, IV Bags, Catheter Parts, Medical Tubing and Surgical Gowns.

General Information			
Features	Biocompatible		
	Fungus Resistant		
	Good Thermal Stability		
	Hydrolytically Stable		
	Low Temperature Resistant		
Uses	Bags		
	Medical/Healthcare Applications		
	Textile Applications		
	Tubing		
Processing Method	Blow Molding		
	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	90		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (H-22 Wheel)	50.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
50% Strain	6.20	MPa	
100% Strain	8.30	MPa	
300% Strain	17.0	MPa	
Tensile Strength (Yield)	41.0	MPa	ASTM D412
Tensile Elongation (Break)	550	%	ASTM D412
Tear Strength <sup>1</sup>	120	kN/m	ASTM D624
Compression Set			ASTM D395B

23°C, 22 hr	25	%
70°C, 22 hr	40	%
Extrusion	Nominal Value	Unit
Drying Temperature	93.0	°C
Cylinder Zone 1 Temp.	182 to 193	°C
Cylinder Zone 2 Temp.	188 to 199	°C
Cylinder Zone 3 Temp.	193 to 204	°C
Adapter Temperature	193 to 204	°C
Die Temperature	193 to 210	°C
NOTE		
1.	Die C	

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