

IROGRAN® A 91 P 4945

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 91 P 4945 is a polyether based thermoplastic polyurethane intended for injection moulding and extrusion applications.

IROGRAN A 91 P 4945 is part of the HUNTSMAN technical extrusion product range and offers a specially designed, flexible material with high extrudability.

PERFORMANCE FEATURES

High microbial resistance

Excellent hydrolysis resistance

High stability of melt

Easy coloring

Low temperature flexibility

General Information			
Features	Good Colorability		
	Good Flexibility		
	Hydrolysis Resistant		
	Low Temperature Flexibility		
	Microbe Resistant		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹			
--	1.14	g/cm ³	ASTM D792
--	1.13	g/cm ³	DIN 53479
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	55.0	cm ³ /10min	
Molding Shrinkage - Flow (Injection Molded)	0.90	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, DIN 53505
Shore A, Injection Molded	92		
Shore D, Injection Molded	39		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	30	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ³			
100% Strain	8.96	MPa	ASTM D412
100% Strain	9.10	MPa	DIN 53504

300% Strain	14.1	MPa	ASTM D412
300% Strain	15.9	MPa	DIN 53504
Tensile Strength ⁴			
Break	33.6	MPa	ASTM D412
Break	45.0	MPa	DIN 53504
Tensile Elongation ⁵			
Break	670	%	ASTM D412
Break	600	%	DIN 53504
Tear Strength ⁶			
--	116	kN/m	ASTM D624
--	74	kN/m	ISO 34-1
Injection	Nominal Value	Unit	
Drying Temperature			
--	100 to 110	°C	
Hot Air Dryer	80.0 to 90.0	°C	
Drying Time			
--	3.0	hr	
Hot Air Dryer	3.0	hr	
Dew Point	-30.0	°C	
Hopper Temperature	25.0 to 35.0	°C	
Rear Temperature	185 to 195	°C	
Middle Temperature	185 to 195	°C	
Front Temperature	185 to 195	°C	
Nozzle Temperature	185 to 200	°C	
Mold Temperature	20.0 to 50.0	°C	
Extrusion	Nominal Value	Unit	
Drying Temperature	100 to 110	°C	
Drying Time	3.0	hr	
Hopper Temperature	25.0 to 40.0	°C	
Cylinder Zone 1 Temp.	185 to 195	°C	
Cylinder Zone 2 Temp.	185 to 195	°C	
Cylinder Zone 3 Temp.	185 to 195	°C	
Cylinder Zone 4 Temp.	185 to 195	°C	
Cylinder Zone 5 Temp.	185 to 195	°C	
Adapter Temperature	190 to 200	°C	
Die Temperature	190 to 200	°C	
NOTE			
1.	Injection Molded		
2.	Injection Molded		
3.	Injection Molded		
4.	Injection Molded		
5.	Injection Molded		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

