

IROGRAN® A 87 P 4946

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 87 P 4946 is a polyether based thermoplastic polyurethane intended for injection moulding and extrusion applications.

IROGRAN A 87 P 4946 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

High production rate

General Information			
Features	Fast Molding Cycle		
	Good Flexibility		
	High Melt Stability		
	Hydrolysis Resistant		
	Microbe Resistant		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.12	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	65.0	cm ³ /10min	
Molding Shrinkage - Flow (Injection Molded)	0.80	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, DIN 53505
Shore A, Injection Molded	87		
Shore D, Injection Molded	38		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	35	mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ³			
100% Strain	8.27	MPa	ASTM D412
100% Strain	7.00	MPa	DIN 53504
300% Strain	12.4	MPa	ASTM D412
300% Strain	11.0	MPa	DIN 53504
Tensile Strength ⁴			

Break	30.3	MPa	ASTM D412
Break	40.0	MPa	DIN 53504
Tensile Elongation ⁵ (Break)	650	%	ASTM D412, DIN 53504
Tear Strength ⁶			
--	98.1	kN/m	ASTM D624
--	60	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	23.9 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.	175 to 185	°C	
Cylinder Zone 2 Temp.	175 to 185	°C	
Cylinder Zone 3 Temp.	175 to 185	°C	
Cylinder Zone 4 Temp.	175 to 185	°C	
Cylinder Zone 5 Temp.	175 to 185	°C	
Adapter Temperature	185 to 195	°C	
Die Temperature	185 to 195	°C	
NOTE			
1.	Injection Molded		
2.	Injection Molded		
3.	Injection Molded		
4.	Injection Molded		
5.	Injection Molded		
6.	Injection Molded		

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