

IROGRAN® A 92 P 4851

Thermoplastic Polyurethane Elastomer (Polyether)

Huntsman Corporation

Message:

IROGRAN A 92 P 4851 is a thermoplastic polyether-polyurethane for injection moulding and extrusion applications. Additional characteristics of the product are high extrudability and low-adhesion surfaces.

PERFORMANCE FEATURES

- Excellent hydrolysis resistance
- High microbial resistance
- High stability of melt
- High production rates
- Low-adhesion surfaces

APPLICATIONS

For the production of jacket material for cables, jackets for high pressure spiral hoses, profiles.

General Information			
Features	Bacteria Resistant		
	Fast Molding Cycle		
	High Melt Stability		
	Hydrolysis Resistant		
	Microbe Resistant		
Uses	Cable Jacketing		
	Hose		
	Profiles		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.14	g/cm ³	
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	55.0	cm ³ /10min	
Molding Shrinkage			
Flow	0.10	%	ASTM D955
--	0.50	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	93		
Shore D, Injection Molded	42		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	35	mm ³	ISO 4649

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ³			
100% Strain	10.0	MPa	ASTM D412, DIN 53504
300% Strain	14.5	MPa	ASTM D412
300% Strain	16.0	MPa	DIN 53504
Tensile Strength ⁴			
Break	35.9	MPa	ASTM D412
Break	40.0	MPa	DIN 53504
Tensile Elongation ⁵			
Break	630	%	ASTM D412
Break	600	%	DIN 53504
Tear Strength ⁶			
--	112	kN/m	ASTM D624
--	75	kN/m	ISO 34-1
Compression Set ⁷			
23°C, 24 hr	25	%	ASTM D395, ISO 815
70°C, 24 hr	45	%	
Bayshore Resilience	33	%	
Thermal	Nominal Value	Unit	
Melting Temperature	160 to 171	°C	
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	
Rear Temperature	175 to 195	°C	
Middle Temperature	175 to 195	°C	
Front Temperature	175 to 195	°C	
Nozzle Temperature	180 to 200	°C	
Processing (Melt) Temp	170 to 195	°C	
Mold Temperature	20.0 to 70.0	°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.	165 to 195	°C	
Cylinder Zone 2 Temp.	165 to 195	°C	
Cylinder Zone 3 Temp.	165 to 195	°C	
Cylinder Zone 4 Temp.	165 to 195	°C	

Cylinder Zone 5 Temp.	165 to 195	°C
Adapter Temperature	175 to 195	°C
Die Temperature	175 to 200	°C

NOTE		
1.	Injection Molded	
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4.	Injection Molded	
5.	Injection Molded	
6.	Injection Molded	
7.	Injection Molded	

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