

# IROGRAN® A 92 E 4694

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 92 E 4694 is a thermoplastic special-polyester-polyurethane for injection moulding and extrusion applications. Additional characteristics of the product are flexibility and high mechanical resistance.

PERFORMANCE FEATURES

- Good melt flow
- High wear resistance
- High oil resistance
- Dynamically highly loadable
- Low-temperature flexibility

APPLICATIONS

For the production of tooth belts, round cords profiles, technical parts.

General Information			
Features	Good Flexibility		
	Good Flow		
	Good Wear Resistance		
	Low Temperature Flexibility		
	Oil Resistant		
Uses	Belts/Belt Repair		
	Engineering Parts		
	Profiles		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity <sup>1</sup>	1.21	g/cm <sup>3</sup>	
Melt Volume-Flow Rate (MVR) (210°C/10.0 kg)	57.0	cm <sup>3</sup> /10min	
Molding Shrinkage - Flow (Injection Molded)	0.40	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	92		
Shore D, Injection Molded	41		
Mechanical	Nominal Value	Unit	Test Method
Abrasion <sup>2</sup>	30	mm <sup>3</sup>	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>3</sup>			DIN 53504

100% Strain	9.00	MPa	
300% Strain	20.0	MPa	
Tensile Stress <sup>4</sup> (Break)	55.0	MPa	DIN 53504
Tensile Elongation <sup>5</sup> (Break)	550	%	DIN 53504
Tear Strength <sup>6</sup>	110	kN/m	ISO 34-1
Compression Set <sup>7</sup>			ASTM D395, ISO 815
23°C, 24 hr	25	%	
70°C, 24 hr	40	%	
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	
Melting Temperature	144 to 195	°C	
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
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	
<b>Extrusion</b>	<b>Nominal Value</b>	<b>Unit</b>	
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 190	°C	
Cylinder Zone 2 Temp.	165 to 190	°C	
Cylinder Zone 3 Temp.	165 to 190	°C	
Cylinder Zone 4 Temp.	165 to 190	°C	
Cylinder Zone 5 Temp.	165 to 190	°C	
Adapter Temperature	175 to 195	°C	
Die Temperature	175 to 200	°C	
<b>NOTE</b>			
1.	Injection Molded		
2.	Injection Molded		
3.	Injection Molded		
4.	Injection Molded		
5.	Injection Molded		
6.	Injection Molded		

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