

IROGRAN® A 70 E 4675

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 70 E 4675 is a softener free thermoplastic special-polyester-polyurethane for injection moulding applications. Additional characteristics of the product are very short cycle times and high dimensional stability.

PERFORMANCE FEATURES

- Easy demolding
 - High demolding stability
 - Short cycle times
 - Softener-free
 - High elasticity
- ### APPLICATIONS

For the production of casual shoe soles, cable bushings, plugs, buffers.

General Information			
Features	Fast Molding Cycle		
	Good Dimensional Stability		
	Good Mold Release		
	High Elasticity		
	Soft		
Uses	Bushings		
	Footwear		
	Plugs		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.15	g/cm ³	
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	30.0	cm ³ /10min	ISO 1133
Molding Shrinkage ²	2.5	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	75		
Shore D, Injection Molded	25		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ³	80	mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ⁴			
100% Strain	3.93	MPa	ASTM D412
100% Strain	3.30	MPa	DIN 53504

300% Strain	6.55	MPa	ASTM D412
300% Strain	5.80	MPa	DIN 53504
Tensile Strength ⁵			
Break	15.2	MPa	ASTM D412
Break	30.0	MPa	DIN 53504
Tensile Elongation ⁶ (Break)	650	%	ASTM D412, DIN 53504
Tear Strength ⁷			
--	52.5	kN/m	ASTM D624
--	45	kN/m	ISO 34-1
Compression Set ⁸			
23°C, 24 hr	35	%	ASTM D395, ISO 815
70°C, 24 hr	45	%	ASTM D395
70°C, 24 hr	58	%	ISO 815
Bayshore Resilience	25	%	
Thermal	Nominal Value	Unit	
Melting Temperature	125 to 190	°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 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	
NOTE			

1.	Injection Molded
2.	Injection Molded
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4.	Injection Molded
5.	Injection Molded
6.	Injection Molded
7.	Injection Molded
8.	Injection Molded

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