

IROGRAN® A 78 E 4723

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 78 E 4723 is a thermoplastic polyester-polyurethane for injection moulding and extrusion applications. Additional characteristics of the product are flexibility and high mechanical resistance.

PERFORMANCE FEATURES

- High transparency
- Good melt flow
- High wear resistance
- High oil resistance
- Dynamically highly loadable

APPLICATIONS

For the production of spiral hoses, profiles hoses, jackets for high pressure hoses, technical parts.

General Information			
Features	Good liquidity		
	Good flexibility		
	Good wear resistance		
	Oil resistance		
	Definition, high		
Uses	Engineering accessories		
	Pipe		
	Profile		
RoHS Compliance	Contact manufacturer		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	50.0	cm ³ /10min	
Molding Shrinkage - Flow	0.80	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molding	80		ASTM D2240, ISO 868
Shore D, Injection Molding	30		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Abrasion ¹	25	mm ³	ISO 4649

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			
100% strain	4.48	MPa	ASTM D412
100% strain	3.80	MPa	DIN 53504
300% strain	10.6	MPa	ASTM D412
300% strain	10.0	MPa	DIN 53504
Tensile Strength ³			
Fracture	38.6	MPa	ASTM D412
Fracture	45.0	MPa	DIN 53504
Tensile Elongation ⁴ (Break)	650	%	ASTM D412, DIN 53504
Tear Strength ⁵			
--	89.3	kN/m	ASTM D624
--	65	kN/m	ISO 34-1
Compression Set ⁶			
			ASTM D395, ISO 815
23°C, 24 hr	25	%	ASTM D395, ISO 815
70°C, 24 hr	38	%	ASTM D395, ISO 815
Thermal	Nominal Value	Unit	
Melting Temperature	121 - 180	°C	
Injection	Nominal Value	Unit	
Drying Temperature			
--	37.8 - 43.3	°C	
Vacuum dryer	26.7 - 32.2	°C	
Drying Time			
--	3.0	hr	
Vacuum dryer	3.0	hr	
Dew Point	-30.0	°C	
Rear Temperature	175 - 195	°C	
Middle Temperature	175 - 195	°C	
Front Temperature	175 - 195	°C	
Nozzle Temperature	180 - 200	°C	
Processing (Melt) Temp	170 - 195	°C	
Mold Temperature	20.0 - 70.0	°C	
Extrusion	Nominal Value	Unit	
Drying Temperature	37.8 - 43.3	°C	
Drying Time	3.0	hr	
Hopper Temperature	25.0 - 40.0	°C	
Cylinder Zone 1 Temp.	165 - 190	°C	
Cylinder Zone 2 Temp.	165 - 175	°C	
Cylinder Zone 3 Temp.	165 - 175	°C	
Cylinder Zone 4 Temp.	165 - 175	°C	
Cylinder Zone 5 Temp.	165 - 175	°C	
Adapter Temperature	175 - 195	°C	

Die Temperature	175 - 200	°C
Extrusion instructions		
Nozzle: 338 to 392°F		
NOTE		
1.	Injection Molded	
2.	Injection Molded	
3.	Injection Molded	
4.	Injection Molded	
5.	Injection Molded	
6.	Injection Molded	

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