

IROGRAN® A 95 E 4813

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 95 R 4813 is a thermoplastic polyester-polyurethane for injection moulding applications.

Additional characteristics of the product are very short cycle times and high dimensional stability.

PERFORMANCE FEATURES

Short cycle times

High demolding stability

High production rates

High wear resistance

High crystallinity

APPLICATIONS

For the production of general injection molding, plugs, bearing shells, bellow valves, o-rings.

General Information			
Features	Fast Molding Cycle		
	Good Dimensional Stability		
	Good Mold Release		
	Good Wear Resistance		
	Highly Crystalline		
	Hydrolysis Resistant		
Uses	General Purpose		
	Plugs		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.21	g/cm ³	
Melt Volume-Flow Rate (MVR) (210°C/21.6 kg)	70.0	cm ³ /10min	
Molding Shrinkage			
Flow	0.80	%	ASTM D955
--	0.80	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	95		
Shore D, Injection Molded	44		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	30	mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ³			

100% Strain	11.0	MPa	ASTM D412
100% Strain	10.0	MPa	DIN 53504
300% Strain	24.1	MPa	ASTM D412
300% Strain	21.0	MPa	DIN 53504
Tensile Strength ⁴			
Break	37.2	MPa	ASTM D412
Break	41.0	MPa	DIN 53504
Tensile Elongation ⁵			
Break	410	%	ASTM D412
Break	550	%	DIN 53504
Tear Strength ⁶			
--	131	kN/m	ASTM D624
--	110	kN/m	ISO 34-1
Compression Set ⁷			
23°C, 24 hr	30	%	ASTM D395, ISO 815
70°C, 24 hr	40	%	ASTM D395
70°C, 24 hr	45	%	ISO 815
Thermal	Nominal Value	Unit	
Melting Temperature	170 to 200	°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
2.	Injection Molded
3.	Injection Molded
4.	Injection Molded
5.	Injection Molded
6.	Injection Molded
7.	Injection Molded

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