IROGRAN® A 85 P 4394

Thermoplastic Polyurethane Elastomer (Polyether)

Huntsman Corporation

Message:

IROGRAN A 85 P 4394 is a high performance polyether based thermoplastic polyurethane intended for extrusion and injection moulding applications. IROGRAN A 85 P 4394 is part of the HUNTSMAN technical extrusion product range and offers a specially designed, flexible material with a broad processing window particularly suitable for the preparation of tubing, cable jacketing and technical mouldings.
PERFORMANCE FEATURES
High tensile strength
Excellent wear performance
Excellent hydrolysis & microbial resistance
Good low temperature flexibility

General Information	
Features	Good Flexibility Good Wear Resistance High Tensile Strength Hydrolysis Resistant Low Temperature Flexibility Microbe Resistant
Uses	Cable Jacketing Tubing
Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.12	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	55.0	cm³/10min	
Molding Shrinkage - Flow (Injection Molded)	0.80	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	85		
Shore D, Injection Molded	36		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Abrasion [2]	25	mm³	ISO 4649
TMA [3]			Internal Method
High : 635.0 µm	170	°C	
Low : 635.0 µm	150	°C	

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress [4]			ASTM D412, DIN 53504
100% Strain	7.00	MPa	
300% Strain	12.0	MPa	
Tensile Strength [5]			
Break	35.0	MPa	ASTM D412
Break	45.0	MPa	DIN 53504
Tensile Elongation [6]			
Break	610	%	ASTM D412
Break	640	%	DIN 53504
Tear Strength [7]			
--	101	kN/m	ASTM D624
--	60	kN/m	ISO 34-1
Compression Set [8]			ASTM D395, ISO 815
23°C, 24 hr	20	%	
70°C, 24 hr	40	%	

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 210	°C
Middle Temperature	175 to 210	°C
Front Temperature	175 to 210	°C
Nozzle Temperature	200 to 210	°C
Processing (Melt) Temp	190 to 205	°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.	160 to 200	°C
Cylinder Zone 2 Temp.	160 to 200	°C
Cylinder Zone 3 Temp.	160 to 200	°C
Cylinder Zone 4 Temp.	160 to 200	°C
Cylinder Zone 5 Temp.	160 to 200	°C
Adapter Temperature	175 to 200	°C
Die Temperature	175 to 205	°C

NOTE

1.	Injection Molded
2.	Injection Molded
3.	Extruded Film
4.	Injection Molded
5.	Injection Molded
6.	Injection Molded
7.	Injection Molded
8.	Injection Molded

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China