

IROGRAN® A 85 P 4350

Thermoplastic Polyurethane Elastomer (Polyether)

Huntsman Corporation

Message:

IROGRAN A 85 P 4350 is a flame-retardant, halogen-free, thermoplastic polyether-polyurethane intended for extrusion and injection moulding applications.

Additional characteristics of the product are excellent microbial resistance, high low-temperature flexibility, especially suitable for cable jackets.

PERFORMANCE FEATURES

Excellent hydrolysis resistance

High microbial resistance

High elasticity

Flame retardant

Halogen-free

Good melt flow

UL 94 classification V2

APPLICATIONS

Cables

Hoses

Profiles

Spiral Hoses

General Information			
UL YellowCard	E208646-228662		
Additive	Flame Retardant		
Features	Flame Retardant		
	Good Flow		
	Halogen Free		
	High Elasticity		
	Hydrolysis Resistant		
	Low Temperature Flexibility		
Uses	Microbe Resistant		
	Cable Jacketing		
	Hose		
Forms	Profiles		
	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	50.0	cm ³ /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	87		
Shore D, Injection Molded	36		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	35	mm ³	ISO 4649
TMA ³			Internal Method
High : 635.0 µm	198	°C	
Low : 635.0 µm	171	°C	
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ⁴			
100% Strain	7.00	MPa	ASTM D412
100% Strain	6.50	MPa	DIN 53504
300% Strain	10.0	MPa	ASTM D412
300% Strain	11.0	MPa	DIN 53504
Tensile Strength ⁵			
Break	25.0	MPa	ASTM D412
Break	40.0	MPa	DIN 53504
Tensile Elongation ⁶			
Break	550	%	ASTM D412
Break	680	%	DIN 53504
Tear Strength ⁷			
--	80.6	kN/m	ASTM D624
--	50	kN/m	ISO 34-1
Compression Set ⁸			ASTM D395, ISO 815
23°C, 24 hr	25	%	
70°C, 24 hr	45	%	
Flammability	Nominal Value		Test Method
Flame Rating	V-2		UL 94
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 |
| 3. | Extruded Film |
| 4. | Injection Molded |
| 5. | Injection Molded |
| 6. | Injection Molded |
| 7. | Injection Molded |
| 8. | Injection Molded |

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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



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