

IROGRAN® A 85 P 5350

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 85 P 5350 is a flame-retardant, halogen-free, polyether based thermoplastic polyurethane intended for extrusion and injection moulding applications.

IROGRAN A 85 P 5350 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 cable jacketing where enhanced fire retardency is required.

PERFORMANCE FEATURES

- High tensile strength
- Excellent wear performance
- Excellent hydrolysis & microbial resistance
- Good low temperature flexibility
- Halogen free
- UL 94 Classification V2 (internal testing)

General Information			
Additive	Flame Retardant		
Features	Flame Retardant		
	Good Flexibility		
	Good Wear Resistance		
	Halogen Free		
	High Tensile Strength		
	Hydrolysis Resistant		
	Low Temperature Flexibility		
	Microbe Resistant		
Uses	Cable Jacketing		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
	Wire & Cable Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.17	g/cm ³	ASTM D792, DIN 53479
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	36.0	cm ³ /10min	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, DIN 53505
Shore A, Injection Molded	89		
Shore D, Injection Molded	37		
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	40	mm ³	DIN 53516
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress ³			
100% Strain	7.10	MPa	ASTM D412
100% Strain	7.80	MPa	DIN 53504
300% Strain	10.9	MPa	ASTM D412
300% Strain	11.3	MPa	DIN 53504
Tensile Strength ⁴			
Break	33.1	MPa	ASTM D412
Break	45.0	MPa	DIN 53504
Tensile Elongation ⁵			
Break	750	%	ASTM D412
Break	690	%	DIN 53504
Tear Strength ⁶			
--	99.8	kN/m	ASTM D624
--	55	kN/m	ISO 34-1
Flammability	Nominal Value		Test Method
Flame Rating ⁷	V-2		UL 94
Injection	Nominal Value	Unit	
Drying Temperature			
--	100 to 120	°C	
Hot Air Dryer	60.0 to 80.0	°C	
Drying Time			
--	3.0	hr	
Hot Air Dryer	3.0	hr	
Dew Point	-30.0	°C	
Rear Temperature	170 to 210	°C	
Middle Temperature	170 to 210	°C	
Front Temperature	170 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 120	°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.	Injection Molded
4.	Injection Molded
5.	Injection Molded
6.	Injection Molded
7.	Internal testing

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