

IROGRAN® A 86 E 4486

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A 86 E 4486 is a thermoplastic polyester-polyurethane for injection moulding and extrusion applications.

Additional characteristics of the product are excellent mechanical properties and high tear strength.

PERFORMANCE FEATURES

Good melt flow

High production rates

High wear resistance

Dynamically highly loadable

Halogen-free

UL 94 Classification V2

APPLICATIONS

For the production of spiral hoses, hose jackets for high pressure hoses, vacuum cleaner hoses, profiles.

General Information	
UL YellowCard	E208646-228664
Features	Flame Retardant
	Good Flow
	Good Tear Strength
	Good Wear Resistance
	Halogen Free
Uses	Hose
	Profiles
Forms	Pellets
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.21	g/cm ³	
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	75.0	cm ³ /10min	
Molding Shrinkage - Flow (Injection Molded)	0.60	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shore A, Injection Molded	85		ASTM D2240, ISO 868
Shore D, Injection Molded	34		ASTM D2240
Shore D, Injection Molded	32		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Abrasion ²	25	mm ³	ISO 4649

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ³			
100% Strain	4.90	MPa	ASTM D412
100% Strain	5.20	MPa	DIN 53504
300% Strain	11.0	MPa	ASTM D412, DIN 53504
Tensile Strength ⁴			
Break	36.0	MPa	ASTM D412
Break	45.0	MPa	DIN 53504
Tensile Elongation ⁵			
Break	750	%	ASTM D412
Break	670	%	DIN 53504
Tear Strength ⁶			
--	99.8	kN/m	ASTM D624
--	63	kN/m	ISO 34-1
Compression Set ⁷			
23°C, 24 hr	25	%	ASTM D395
70°C, 24 hr	40	%	ASTM D395
23°C, 24 hr	21	%	ISO 815
70°C, 24 hr	35	%	ISO 815
Bayshore Resilience	40	%	
Thermal	Nominal Value	Unit	
Melting Temperature	155 to 170	°C	
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 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	
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4.	Injection Molded	
5.	Injection Molded	
6.	Injection Molded	
7.	Injection Molded	

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