IROGRAN® A 92 E 4860

Thermoplastic Polyurethane Elastomer (Polyester)

Huntsman Corporation

Message:

IROGRAN A92E 4860 is a high performance polyester based thermoplastic polyurethane intended for extrusion and injection moulding applications. IROGRAN A92E 4860 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 spiral tubing, pneumatic tubing, belting and technical mouldings.
PERFORMANCE FEATURES
High tensile strength
Excellent wear performance
Excellent hydrolysis resistance
Good low temperature flexibility

General Information	
Features	Good Flexibility Good Wear Resistance High Tensile Strength Hydrolysis Resistant Low Temperature Flexibility
Uses	Belts/Belt Repair Tubing
Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.20	g/cm³	ASTM D792, DIN 53479
Melt Volume-Flow Rate (MVR) (210°C/10.0 kg)	33.0	cm³/10min	
Molding Shrinkage - Flow (Injection Molded)	0.90	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240, DIN 53505
Shore A, Injection Molded	91		
Shore D, Injection Molded	42		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Abrasion [2]	25	mm³	DIN 53516
TMA [3]			Internal Method
Low-High : 635.0 µm	180 to 200	°C	
Peak : 635.0 µm	170	°C	
Elastomers	**Nominal Value**	**Unit**	**Test Method**

Tensile Stress [4]			
100% Strain	8.00	MPa	ASTM D412
100% Strain	7.50	MPa	DIN 53504
300% Strain	15.2	MPa	ASTM D412
300% Strain	16.0	MPa	DIN 53504
Tensile Strength [5]			
Break	44.8	MPa	ASTM D412
Break	49.0	MPa	DIN 53504
Tensile Elongation [6]			
Break	620	%	ASTM D412
Break	590	%	DIN 53504
Tear Strength [7]			
--	116	kN/m	ASTM D624
--	85	kN/m	ISO 34-1
Compression Set [8]			ASTM D395, ISO 815
23°C, 24 hr	25	%	
70°C, 24 hr	29	%	

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	190 to 220	°C
Middle Temperature	190 to 220	°C
Front Temperature	190 to 220	°C
Nozzle Temperature	210 to 225	°C
Processing (Melt) Temp	205 to 220	°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.	200 to 210	°C
Cylinder Zone 2 Temp.	200 to 210	°C
Cylinder Zone 3 Temp.	200 to 210	°C
Cylinder Zone 4 Temp.	200 to 210	°C
Cylinder Zone 5 Temp.	200 to 210	°C
Adapter Temperature	200 to 210	°C
Die Temperature	200 to 210	°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

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