

IROGRAN® A 78 P 4766

Thermoplastic Polyurethane Elastomer (Polyether)

Huntsman Corporation

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

IROGRAN A 78 P 4766 is a flame-retardant, halogen-free, thermoplastic polyether-polyurethane intended for extrusion and injection moulding applications.

Additional characteristics of the product is the high flexibility and elasticity.

PERFORMANCE FEATURES

- High hydrolysis resistance
- High microbial resistance
- Flame retardant
- Halogen-free
- UL 94 classification V0

APPLICATIONS

- Cables
- Hoses
- Spiral Hoses
- Profiles
- Cable Bushings

General

Material Status	• Commercial: Active
Literature ¹	• Processing - Injection Molding (English) • Technical Datasheet (English)
UL Yellow Card ²	• E208646-228665
Search for UL Yellow Card	• Huntsman Corporation • IROGRAN®
Availability	• Europe • North America
Additive	• Flame Retardant
Features	• Flame Retardant • Halogen Free • Hydrolysis Resistant • Good Flexibility • High Elasticity • Microbe Resistant
Uses	• Bushings • Hose • Cable Jacketing • Profiles
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity ⁴	1.16 g/cm ³	ASTM D792 ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	110 cm ³ /10min	
Molding Shrinkage - Flow (Injection Molded)	1.0 %	ASTM D955

Mechanical	Nominal Value Unit	Test Method
Abrasion ⁴	40 mm ³	ISO 4649

Elastomers	Nominal Value Unit	Test Method
Tensile Stress ⁴		
100% Strain	5.79 MPa	ASTM D412
100% Strain	5.20 MPa	DIN 53504
300% Strain	9.65 MPa	ASTM D412
300% Strain	8.00 MPa	DIN 53504
Tensile Strength ⁴		
Break	27.6 MPa	ASTM D412
Break	30.0 MPa	DIN 53504
Tensile Elongation ⁴ (Break)	800 %	ASTM D412 DIN 53504



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Elastomers	Nominal Value Unit	Test Method
Tear Strength ⁴		
--	71.8 kN/m	ASTM D624
--	40.0 kN/m	ISO 34-1
Compression Set ⁴		ASTM D395
23°C, 24 hr	20 %	ISO 815
70°C, 24 hr	40 %	
Hardness	Nominal Value Unit	Test Method
Durometer Hardness		ASTM D2240
Shore A, Injection Molded	82	ISO 868
Shore D, Injection Molded	30	
Thermal	Nominal Value Unit	Test Method
TMA ⁵		Internal Method
High : 635.0 µm	190 °C	
Low : 635.0 µm	165 °C	
Flammability	Nominal Value Unit	Test Method
Flame Rating	V-0	UL 94
Injection	Nominal Value Unit	
Drying Temperature		
--	100 to 110 °C	
Hot Air Dryer	80 to 90 °C	
Drying Time		
--	3.0 hr	
Hot Air Dryer	3.0 hr	
Dew Point	-30 °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 to 70 °C	
Extrusion	Nominal Value Unit	
Drying Temperature	100 to 110 °C	
Drying Time	3.0 hr	
Hopper Temperature	25 to 40 °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	

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Injection Molded

⁵ Extruded Film



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Where to Buy

Supplier

Huntsman Corporation

Odessa, Odessa USA

Telephone: 800-233-1159

Web: <http://www.huntsman.com/>

Distributor

Alliance Polymers and Services, LLC

Telephone: 734-710-6700

Web: <http://www.apstpe.com/>

Availability: North America

CCC Plastics

Telephone: 800-461-1638

Web: <https://www.ccc-group.com/>

Availability: Canada

Chase Plastic Services, Inc.

Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here: <http://www.chaseplastics.com/contact/locations>

Telephone: 800-232-4273

Web: <http://www.chaseplastics.com/>

Availability: North America

GAZECHIM PLASTIQUES

GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.

Telephone: +33-4-67-49-55-37

Web: <http://www.gazechim.com/>

Availability: Belgium, Denmark, France, Netherlands, Romania, United Kingdom

M. Holland Canada Company

Telephone: 905-665-1168

Web: <http://www.mholland.com/>

Availability: Canada

M. Holland Company

Telephone: 855-497-1403

Web: <http://www.mholland.com/>

Availability: Mexico, United States

