IROGRAN® A 78 P 4766

Thermoplastic Polyurethane Elastomer (Polyether)

Huntsman Corporation

Message:

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 Information	
UL YellowCard	E208646-228665
Additive	Flame Retardant
Features	Flame Retardant Good Flexibility Halogen Free High Elasticity Hydrolysis Resistant Microbe Resistant
Uses	Bushings Cable Jacketing Hose Profiles
Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.16	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/21.6 kg)	110	cm³/10min	
Molding Shrinkage - Flow (Injection Molded)	1.0	%	ASTM D955

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A, Injection Molded	82		
Shore D, Injection Molded	30		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Abrasion [2]	40	mm^3	ISO 4649
TMA [3]			Internal Method
High : 635.0 µm	190	°C	
Low : 635.0 µm	165	°C	
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 [5]			
Break	27.6	MPa	ASTM D412
Break	30.0	MPa	DIN 53504
Tensile Elongation [6] (Break)	800	%	ASTM D412, DIN 53504
Tear Strength [7]			
--	71.8	kN/m	ASTM D624
--	40	kN/m	ISO 34-1
Compression Set [8]			ASTM D395, ISO 815
23°C, 24 hr	20	%	
70°C, 24 hr	40	%	
Flammability	**Nominal Value**		**Test Method**
Flame Rating	V-0		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

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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