

Huntsman IROGRAN® A 95 K 4640 TPU-For Seals

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane TPE , Polyurethane, TP

Material Notes:

Introduction: IROGRAN A95K 4640 is a caprolactone-based thermoplastic polyurethane. The material has been developed for injection molding applications requiring exceptional performance in terms of compression set, wear resistance and hydrolysis resistance over conventional polyester-based TPUs. IROGRAN A95K 4640 is part of the High Performance Injection Molding product range and offers a specially designed, flexible material suitable for the production of seals, wheels and rollers, coupling halves and o-rings. Performance

Features: High wear resistanceLow compression set Short cycle timesExcellent hydrolysis resistanceResistant to high dynamic loads

Information provided by Huntsman

Order this product through the following link:

http://www.lookpolymers.com/polymer_Huntsman-IROGRAN-A-95-K-4640-TPU-For-Seals.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D792
Linear Mold Shrinkage	0.0080 cm/cm	0.0080 in/in	
Melt Index of Compound	5.0 - 10 g/10 min @Load 21.6 kg, Temperature 210 °C	5.0 - 10 g/10 min @Load 47.6 lb, Temperature 410 °F	cm ³ /10 min

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	95	95	ASTM D2240
Hardness, Shore D	47	47	ASTM D2240
Tensile Strength at Break	53.0 MPa	7690 psi	ASTM D412
Tensile Strength, Yield	7.00 MPa @Strain 20.0 %	1020 psi @Strain 20.0 %	DIN 53504
Elongation at Break	450 %	450 %	ASTM D412
50% Modulus	0.00900 GPa	1.31 ksi	DIN 53504
100% Modulus	0.0115 GPa	1.67 ksi	DIN 53504
200% Modulus	0.0142 GPa	2.06 ksi	DIN 53504
300% Modulus	0.0204 GPa	2.96 ksi	DIN 53504
Tear Strength	105 kN/m	599 pli	ASTM D624
Abrasion	35	35	[mm ³]; ASTM D395
	14 %	14 %	

Mechanical Properties	Metric	English	Comments
	@ Temperature 23.0 Â°C, Time 86400 sec	@ Temperature 73.4 Â°F, Time 24.0 hour	
	23 %	23 %	
	@Temperature 70.0 Â°C, Time 86400 sec	@Temperature 158 Â°F, Time 24.0 hour	ASTM D395
	25 %	25 %	
	@Temperature 100 Â°C, Time 86400 sec	@Temperature 212 Â°F, Time 24.0 hour	ASTM D395
	38 %	38 %	
	@Temperature 100 Â°C, Time 252000 sec	@Temperature 212 Â°F, Time 70.0 hour	ASTM D395

Thermal Properties	Metric	English	Comments
Vicat Softening Point	165 Â°C	329 Â°F	DIN 53372

Processing Properties	Metric	English	Comments
Nozzle Temperature	200 Â°C	392 Â°F	Injection
Zone 1	205 Â°C	401 Â°F	Injection
Zone 2	205 Â°C	401 Â°F	Injection
Zone 3	205 Â°C	401 Â°F	Injection
Mold Temperature	25.0 - 70.0 Â°C	77.0 - 158 Â°F	Injection

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