

## Huntsman IROGRAN® A 92 K 4107 TPU-High Temperature Performance

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

### Material Notes:

**Introduction:** IROGRAN A92K 4107 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 A92K 4107 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 resistance Low compression set Short cycle times Excellent hydrolysis resistance Resistant to high dynamic loads

Information provided by Huntsman

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Huntsman-IROGRAN-A-92-K-4107-TPU-High-Temperature-Performance.php](http://www.lookpolymers.com/polymer_Huntsman-IROGRAN-A-92-K-4107-TPU-High-Temperature-Performance.php)

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in <sup>3</sup>	ASTM D792
Linear Mold Shrinkage	0.0070 cm/cm	0.0070 in/in	ASTM D995
Melt Index of Compound	6.0 g/10 min @Load 21.6 kg, Temperature 210 °C	6.0 g/10 min @Load 47.6 lb, Temperature 410 °F	cm <sup>3</sup> /10 min

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	91	91	ASTM D2240
Hardness, Shore D	41	41	ASTM D2240
Tensile Strength at Break	55.0 MPa	7980 psi	DIN 53504
Elongation at Break	580 %	580 %	ASTM D412
100% Modulus	0.00790 GPa	1.15 ksi	DIN 53504
300% Modulus	0.0123 GPa	1.78 ksi	DIN 53504
Rebound	40 %	40 %	Bayshore; ASTM D2632
Tear Strength	116 kN/m	660 pli	ASTM D624
Abrasion	25	25	[mm <sup>3</sup> ]; ISO 4649
Compression Set	12 % @Temperature 23.0 °C, Time 252000 sec	12 % @Temperature 73.4 °F, Time 70.0 hour	ASTM D395
	25 %	25 %	ASTM D395

Mechanical Properties	Metric @Temperature 70.0 °C, Time 66400 sec	English @Temperature 158 °F, Time 24.0 hour	Comments
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Thermal Properties	Metric	English	Comments
Melting Point	190 - 200 °C	374 - 392 °F	Huntsman/TMA

Processing Properties	Metric	English	Comments
Nozzle Temperature	205 °C	401 °F	Injection
Zone 1	205 °C	401 °F	Injection
Zone 2	210 °C	410 °F	Injection
Zone 3	210 °C	410 °F	Injection
Mold Temperature	25.0 - 70.0 °C	77.0 - 158 °F	Injection

## Contact Songhan Plastic Technology Co.,Ltd.

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