

Huntsman IROGRAN® A 87 H 4615 Polyester-Based TPU-Injection Molding Grade

Categories: [Polymer](#); [Thermoplastic](#); [Elastomer, TPE](#); [Polyurethane TPE](#); [Polyurethane, TP](#); [Thermoplastic Polyurethane, Elastomer, Polyester Grade](#)

Material Notes: Introduction: IROGRAN A 87 H 4615 is a thermoplastic polyester- polyurethane for injection molding applications. Additional characteristics of the product are very short cycle times and high dimensional stability


Performance Features:

- Easy demolding
- Good melt flow
- High wear resistance
- High elasticity
- Dynamically highly loadable

Applications: For the production of mining screens, coupling halves, technical parts, cylinders, buffers

Information provided by Huntsman

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792
Linear Mold Shrinkage	0.011 cm/cm	0.011 in/in	ASTM D995
Melt Index of Compound	50 g/10 min @Load 21.6 kg, Temperature 190 °C	50 g/10 min @Load 47.6 lb, Temperature 374 °F	cm ³ /10 min
Mechanical Properties	Metric	English	Comments
Hardness, Shore A	95	95	ASTM D2240
Hardness, Shore D	35	35	ASTM D2240
Tensile Strength at Break	45.0 MPa	6530 psi	DIN 53504
Elongation at Break	720 %	720 %	ASTM D412
100% Modulus	5.60 MPa @Strain 100 %	812 psi @Strain 100 %	DIN 53504
300% Modulus	11.1 MPa @Strain 300 %	1610 psi @Strain 300 %	DIN 53504
Rebound	40 %	40 %	Bayshore; ASTM D2632
Tear Strength	105 kN/m	600 pli	ASTM D624
Abrasion	25	25	[mm ³]; ISO 4649
Compression Set 	25 % @Temperature 23.0 °C, Time 252000 sec	25 % @Temperature 73.4 °F, Time 70.0 hour	ASTM D395
	43 % @Temperature 70.0 °C, Time 86400 sec	43 % @Temperature 158 °F, Time 24.0 hour	ASTM D395
Thermal Properties	Metric	English	Comments
Melting Point	135 - 185 °C	275 - 365 °F	Huntsman/TMA
Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not reported
Processing Properties	Metric	English	Comments
Feed Temperature	25.0 - 40.0 °C	77.0 - 104 °F	Extrusion
Front Barrel Temperature	165 - 190 °C	329 - 374 °F	Extrusion
Nozzle Temperature	170 - 200 °C	338 - 392 °F	Extrusion
	180 - 200 °C	356 - 392 °F	Injection
Adapter Temperature	175 - 195 °C	347 - 383 °F	Extrusion
Die Temperature	175 - 200 °C	347 - 392 °F	Extrusion
Melt Temperature	170 - 195 °C	338 - 383 °F	Injection
Mold Temperature	20.0 - 70.0 °C	68.0 - 158 °F	Injection

Descriptive Properties

Heating Zone 175-195°C

Injection

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.