

Styron INSPIRE[®],ç DLGF 9631.01 Z Polypropylene homopolymer, 60% LGF

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

Overview: DLGF 9631.01 Z is based on polypropylene homopolymer and reinforced with 60% by weight of long glass fiber. (PP-LGF 60, Long Glassfiber Granulate). DLGF 9631.01 Z is produced by pultrusion/multipregnation process, thereby ensuring through impregnation of all the filaments in the glassfiber-roving and also providing improve "pellet robustness" for air conveying. It is available in "standard black" color (TR 7701862). This PP-LGF60 is a "concentrate" which has to be diluted "usually with "neat"-PP but also mineral-filled PP-based compounds can be used. The "dilution" is typically done as a dry-blend of granulates by means of gravimetric dosing devices at the injection-molding machine. A weight ratio of 1 : 1 of DLGF 9631.01 Z and i.e. LGF 8100 PP-copolymer will result in a composite-material-system have 30% by weight of glassfiber. The "long" glass fiber (initial length = 11 mm) provide high stiffness, strength and impact-resistance to the injection molded parts. DLGF 9631.01 Z has been especially formulated to meet the requirements for use in automotive "under-the-hood" (UTH) and "under-body" applications i.e. front-end carriers (FEC) aka "bolster", impingement shields or structural parts like i.e. battery trays or spare wheel wells. The long term heat ageing resistance (LTHA) has been increased to a high level of needed for "UTH" applications. Injection molded parts based on DLGF 9631.01 Z diluted with "neat"-PP to 30% GF-content will show no signs of degradation and surpass the limit of >100 h @ 150°C. When diluted to 40% GF-content, the heat aging performance of compsites based on DLGF 9631.01 Z will increase beyond the 1000 h. In many cases, even a dilution to 20% will result passing beyond 1000 h @ 150°C, however this will depend on the wall-thickness of molded parts as well as the choice of dilution resin and therefore, it is recommended to conduct own tests. Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-INSPIRE-DLGF-963101-Z-Polypropylene-homopolymer-60-LGF.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 lb/in ³	ISO 1183

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	105 MPa	15200 psi	ISO 527-2/50
Elongation at Break	2.3 %	2.3 %	ISO 527-2/50
	29 %	29 %	Flexural Strain, outer 'fiber' strain; ISO 178
Tensile Modulus	6.50 GPa	943 ksi	ISO 527-2/5
Flexural Strength	155 MPa	22500 psi	3-Point Bending; ISO 178
Flexural Modulus	6.50 GPa	943 ksi	3-Point Bending; ISO 178
Izod Impact, Notched	2.30 J/cm @Temperature 23.0 °C	4.31 ft-lb/in @Temperature 73.4 °F	ASTM D256
	17.0 kJ/m ²	8.09 ft-lb/in ²	

Izod Impact Unnotched (ISO)		English	
Mechanical Properties	Metric	@ Temperature 23.0 °C	Comments
Charpy Impact Unnotched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/1fU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.30 J/cm ²	25.2 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Multi-axial Impact @ -30°C Total Energy	19.0 J	14.0 ft-lb	4.4 m/sec, 20 mm Striker Diameter; Support = 40 mm; ISO 6603-2
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	155 °C	311 °F	ASTM D648; ISO 75-2/A

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