GLS 462-112

Thermoplastic Elastomer

Key Characteristics

Product Description		
GLS 462-112 is an ultrasoft thermoplastic elastomer material based on styrenic block copolymers.		
General		
Material Status	• Commercial: Active	
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America
Features	• Soft	
Uses	• Artificial Skin • Consumer Applications	• Footwear • Personal Care
RoHS Compliance	• RoHS Compliant	
Appearance	• Natural Color	
Forms	• Pellets	
Processing Method	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	0.870 g/cm³	0.870 g/cm³	ISO 1183
Molding Shrinkage (0.0787 in (2.00 mm))	10 %	10 %	ISO 294-4
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress - Flow [2]			ISO 37
Break, 73°F (23°C), 0.0787 in (2.00 mm)	> 72.5 psi	> 0.500 MPa	
Tensile Elongation - Flow [2]			ISO 37
Break, 73°F (23°C), 0.0787 in (2.00 mm)	> 800 %	> 800 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore OO, 10 sec)	35	35	ISO 48-4

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	212 to 257 °F	100 to 125 °C
Middle Temperature	257 to 293 °F	125 to 145 °C
Front Temperature	284 to 320 °F	140 to 160 °C
Nozzle Temperature	293 to 356 °F	145 to 180 °C
Processing (Melt) Temp	293 to 356 °F	145 to 180 °C
Mold Temperature	59 to 95 °F	15 to 35 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa
Screw Speed	25 to 110 rpm	25 to 110 rpm

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Injection Notes

Color concentrates with GLS 462-112 as the carrier are most suitable for coloring this product. If a GLS 462-112 color concentrate carrier is desired, it is important that the chosen color house have underwater pelletization capabilities. Typical loadings for color concentrates are from 1% to 5% by weight. Liquid color (pigment, not dye) can be used; while oil carriers are recommended. A high color match consistency can be obtained by using precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they lead to poor dispersion and can significantly change the hardness of this material. Concentrates based on PVC should not be used. The final determination of color concentrate suitability should be determined by customer trails.

Purge thoroughly before and after use of his product with a low flow (0.2-2.5 MFR) polyethylene (PE) or polypropylene (PP)GLS Regrind levels up to 20% can be used with GLS 462-112 with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should reamain as low as possible. The final determination of regrind effectiveness should be determined by customer.

GLS 462-112 has good melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptiedif it is idle for periods of 5-8 minutes or longer.

Drying is not required.

Notes

[1] Typical values are not to be construed as specifications.

[2] 7.9 in/min (200 mm/min)

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