GLS 451-121

Thermoplastic Elastomer

Key Characteristics

Product Description	
GLS 451-121 is a general purpose TPE compound designed for various consumer markets. And the compound is formulated based on hydrogenated styrenic block copolymers(SEBS).	
General	
Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
RoHS Compliance	• RoHS Compliant
Appearance	• Translucent
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.880	0.880	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	80.0 psi	0.552 MPa	ASTM D412
Tensile Strength [2, 3] (Yield, 73°F (23°C))	490 psi	3.38 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	940 %	940 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	24	24	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	12.8 Pa·s	12.8 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	330 to 370 °F	166 to 188 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	370 to 440 °F	188 to 227 °C
Nozzle Temperature	360 to 420 °F	182 to 216 °C
Processing (Melt) Temp	380 to 440 °F	193 to 227 °C
Mold Temperature	60 to 100 °F	16 to 38 °C

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Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring GLS 451-121. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Concentrates based on PVC should not be used. The final determination of color concentrate suitability should be determined by customer trials.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

Regrind levels up to 20% can be used with GLS 451-121 with minimal property losses, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should be as low as possible. The final determination of regrind effectiveness should be determined by the customer.

GLS 451-121 has excellent melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptied if it is idle for periods of 8 - 10 minutes or longer.

Drying is not Required

Notes

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

[2] Die C

[3] 2 hr

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