GLS 453-005A GREY

Thermoplastic Elastomer

Key Characteristics

Product Description		
GLS 453-005A Grey is customized TPE designed for injection molding onto Polypropylene with good processability and short cycle time.		
General		
Material Status	• Commercial: Active	
Regional Availability	• Asia Pacific	
Features	• Good Flow	• Good Processability
Uses	• Consumer Applications • Flexible Grips	• Overmolding • Personal Care
Agency Ratings	• FDA [1]	
RoHS Compliance	• RoHS Compliant	
Appearance	• Grey	
Forms	• Pellets	
Processing Method	• Injection Molding	

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.18	1.18	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	290 psi	2.00 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	580 psi	4.00 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	650 %	650 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	42	42	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	8.50 Pa·s	8.50 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	329 to 365 °F	165 to 185 °C
Front Temperature	356 to 419 °F	180 to 215 °C
Nozzle Temperature	365 to 428 °F	185 to 220 °C
Mold Temperature	59 to 95 °F	15 to 35 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa

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Injection Notes

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 453-005A GREY with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

GLS 453-005A GREY 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

Injection Speed: 0.5 to 3 in/sec
1st Stage - Boost Pressure: 400 to 900 psi

Notes

[1] Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

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

[3] Die C

[4] 2 hr

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