GLS AC1-550 Black

Thermoplastic Elastomer

Key Characteristics

Product Description			
GLS AC1-550 Black is a vibration and impact damping TPE formulated to bond to polar resins including Polycarbonate (PC), ABS, PC/ABS, and Copolyester			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific		
Features	• Good Adhesion	• Vibration Damping	
Uses	• Appliance Components • Automotive Applications • Consumer Applications	• Flexible Grips • General Purpose • Overmolding	• Power/Other Tools • Soft Touch Applications • Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.07	1.07	ASTM D792
Molding Shrinkage - Flow	0.010 to 0.023 in/in	1.0 to 2.3 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	489 psi	3.37 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	1200 psi	8.27 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	710 %	710 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	52	52	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	12.6 Pa·s	12.6 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	140 to 176 °F	60 to 80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.030 %	0.030 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 410 °F	182 to 210 °C
Front Temperature	370 to 420 °F	188 to 216 °C
Nozzle Temperature	380 to 430 °F	193 to 221 °C
Mold Temperature	55 to 85 °F	13 to 29 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa

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Injection Notes

Color concentrates based on GLS AC1-550 Black are most suitable for coloring GLS AC1-550 Black . Typical loadings for color concentrates are 1% to 4% by weight. Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. 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 polypopylene (PP).

Regrind levels up to 20% can be used with GLS AC1-550 Black 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 AC1-550 Black 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.

Suggested Dewpoint: -40°F
Injection Speed: 0.5 to 2 in/sec
1st Stage - Boost Pressure: 500 to 1000 psi
2nd Stage - Hold Pressure: 20-60% of Boost
Hold Time (Thick Part): 2 to 4 sec
Hold Time (Thin Part): 1 to 2 sec

Notes

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

[2] Die C

[3] 2 hr

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