GLS AC1-595 Midnight Black

Thermoplastic Elastomer

Key Characteristics

Product Description			
GLS AC1-595 Midnight Black is an easy processing, general purpose TPE designed for a wide variety of applications. • Overmold adhesion to PC, ABS, PBT • Good appearance			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific		
Features	• Good Flow	• Good Processability	• Pleasing Surface Appearance
Uses	• Consumer Applications	• Electrical/Electronic Applications	• Overmolding
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.17	1.17	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	2210 psi	15.3 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	4630 psi	31.9 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	850 %	850 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore D, 10 sec)	44	44	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	135 Pa·s	135 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 to 212 °F	80 to 100 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Suggested Max Moisture	0.020 to 0.030 %	0.020 to 0.030 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 464 °F	182 to 240 °C
Front Temperature	392 to 491 °F	200 to 255 °C
Nozzle Temperature	392 to 482 °F	200 to 250 °C
Processing (Melt) Temp	392 to 482 °F	200 to 250 °C
Mold Temperature	55 to 110 °F	13 to 43 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa

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Injection	Typical Value (English)	Typical Value (SI)
Screw Speed	50 to 100 rpm	50 to 100 rpm

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 AC1-595 Midnight 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 AC1-595 Midnight Black should not be left in the barrel for extended idle periods (greater than 10 minutes).

Suggested Dewpoint: -40°F

Injection Speed: 0.5 to 4 in/sec
1st Stage - Boost Pressure: 500 to 1,000 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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