



GLS 406-051C Black

Thermoplastic Elastomer

Key Characteristics

Product Description	
GLS 406-051C Black is a custom thermoplastic elastomer formulation	
General	
Material Status	<ul style="list-style-type: none"> Proprietary and/or Private
Regional Availability	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America
Features	<ul style="list-style-type: none"> Abrasion Resistant Oil Resistant
Uses	<ul style="list-style-type: none"> Consumer Applications Furniture Overmolding Power/Other Tools Soft Touch Applications
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant
Appearance	<ul style="list-style-type: none"> Black
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Extrusion Injection Molding

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
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))	575 psi	3.96 MPa	ASTM D412
Tensile Strength ^{2,3} (Break, 73°F (23°C))	1760 psi	12.1 MPa	ASTM D412
Tensile Elongation ^{2,3} (Break, 73°F (23°C))	740 %	740 %	ASTM D412
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	63	63	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec ⁻¹	14.9 Pa·s	14.9 Pa·s	ASTM D3835

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	125 to 130 °F	52 to 54 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	< 0.030 %	< 0.030 %
Suggested Max Re grind	20 %	20 %
Rear Temperature	335 to 370 °F	168 to 188 °C
Middle Temperature	355 to 390 °F	179 to 199 °C
Front Temperature	375 to 410 °F	191 to 210 °C
Nozzle Temperature	375 to 420 °F	191 to 216 °C
Processing (Melt) Temp	370 to 410 °F	188 to 210 °C
Mold Temperature	70 to 90 °F	21 to 32 °C
Back Pressure	0.00 to 125 psi	0.00 to 0.862 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

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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 406-051C 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 406-051C Black should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°F

Injection Speed: 0.5 to 2 in/sec
 1st Stage - Boost Pressure: 300 to 700 psi
 2nd Stage - Hold Pressure: 30% of Boost
 Hold Time (Thick Part): 4 to 10 sec
 Hold Time (Thin Part): 1 to 3 sec

Notes

¹ Typical values are not to be construed as specifications.

² Die C

³ 2 hr

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