

# GLS 476-079C

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

GLS 476-079C is targeted for where blue jean stain resistance, high transparency, excellent UV stability, chemical resistance and silky feel are required.

It can also overmold to a variety of substrates including PC, ABS and PC/ABS, and is primarily for phone cases, consumer electronics and consumer electronics accessories.

#### General

Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
Features	• Specialty Grade
Uses	• Consumer Applications • Overmolding • Soft Touch Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.08	1.08	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	12 g/10 min	12 g/10 min	ASTM D1238
Water Absorption (Saturation)	0.20 %	0.20 %	ASTM D570
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength (100% Strain)	815 psi	5.62 MPa	ASTM D638
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (100% Strain)	815 psi	5.62 MPa	ASTM D412
Tensile Strength <sup>2, 3</sup> (Break, 73°F (23°C))	1490 psi	10.3 MPa	ASTM D412
Tensile Elongation <sup>2, 3</sup> (Break, 73°F (23°C))	350 %	350 %	ASTM D412
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	66	66	ASTM D2240
Optical	Typical Value (English)	Typical Value (SI)	Test Method
Haze	5.30 %	5.30 %	ASTM D1003
Yellowness Index	0.78 YI	0.78 YI	ASTM D1925
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec <sup>-1</sup>	20.0 Pa·s	20.0 Pa·s	ASTM D3835

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	120 to 140 °F	49 to 60 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.020 to 0.030 %	0.020 to 0.030 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 410 °F	182 to 210 °C

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Injection	Typical Value (English)	Typical Value (SI)
Front Temperature	370 to 420 °F	188 to 216 °C
Nozzle Temperature	380 to 430 °F	193 to 221 °C
Processing (Melt) Temp	380 to 425 °F	193 to 218 °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
Screw Speed	50 to 100 rpm	50 to 100 rpm

**Injection Notes**

Typical colorant letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect on adhesion. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Concentrates based on PVC should not be used. The final determination of color concentrate suitability should be determined by customer trials. Contact GLS for more information on appropriate color concentrate base resins.

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

GLS 476-079C should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°F

Hot Runners: 380°F-440°F

Hot Tip: 380°F-450°F

Injection Speed: 0.5 to 2 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**

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Die C

<sup>3</sup> 2 hr

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