# 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 [1]

| 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 [2, 3] (Break, 73°F (23°C)) | 1490 psi | 10.3 MPa | ASTM D412 |
| Tensile Elongation [2, 3] (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 | | | ASTM D3835 |
| 392°F (200°C), 11200 sec^-1 | 20.0 Pa·s | 20.0 Pa·s | |

### 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

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

[2] Die C

[3] 2 hr

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