GLS AF0-816

Thermoplastic Elastomer

Key Characteristics

Product Description

GLS AF0-816 is an easy processing compound and customized for injection molding applications.

- Excellent Clarity
- Overmold Adhesion to Polypropylene
- Superior Colorability

General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific		
Features	• Good Colorability • Good Moldability	• Good Processability • High Clarity	
Uses	• Medical/Healthcare Applications • Overmolding	• Personal Care • Transparent Parts	
Agency Ratings	• FDA Food Contact [1]	• ISO 10993	• USP Class VI
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.890	0.890	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	276 psi	1.90 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	972 psi	6.70 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	880 %	880 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	33	33	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	13.9 Pa·s	13.9 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	329 to 365 °F	165 to 185 °C
Middle Temperature	347 to 401 °F	175 to 205 °C
Front Temperature	365 to 410 °F	185 to 210 °C
Nozzle Temperature	383 to 428 °F	195 to 220 °C
Processing (Melt) Temp	392 to 428 °F	200 to 220 °C
Mold Temperature	55 to 100 °F	13 to 38 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa

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Injection	Typical Value (English)	Typical Value (SI)
Screw Speed	25 to 75 rpm	25 to 75 rpm

Injection Notes

Color concentrates based on polypropylene (PP), ethylene vinyl acetate (EVA), or polyethylene (PE) are most suitable for coloring GLS AF0-816. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25-40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value. Concentrates based on PVC should not be used. A high color match consistency can be obtained by the use of 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 polypropylene (PP).

Regrind levels up to 20% can be used with GLS AF0-816 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 AF0-816 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.

Drying is not Required

Injection Speed: 0.5 to 2 in/sec
1st Stage - Boost Pressure: 100 to 800 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] Please contact PolyOne GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

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

[3] Die C

[4] 2 hr

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