GLS 471-022

Thermoplastic Elastomer

Key Characteristics

Product Description			
GLS 471-022 is a customized thermoplastic elastomer and targeted for healthcare and medical application.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific	• Europe	• North America
Features	• Specialty Grade		
Uses	• Bottles	• Film	• Medical/Healthcare Applications
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion		

Technical Properties [1]

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 [2, 3] (300% Strain, 73°F (23°C))	1800 psi	12.4 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	2100 psi	14.5 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	550 %	550 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore D, 10 sec)	48	48	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	140 Pa·s	140 Pa·s	
392°F (200°C), 11200 sec^-1	30.0 Pa·s	30.0 Pa·s	

Processing Information

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	360 to 400 °F	182 to 204 °C
Die Temperature	340 to 390 °F	171 to 199 °C

Extrusion Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring GLS 471-022. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40g/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 using 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).

Drying is not Required.

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Notes

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

[2] Die C

[3] 2 hr

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