

GLS 422-126

Thermoplastic Elastomer

PolyOne Corporation

Message:

GLS 422-126 is designed to pass several fatty food extraction conditions identified in EU Directive 10/2011 and may be appropriate where FDA and EU 10/2011 compliances are required.

GLS 422-126 will also overmold and co-extrude to polypropylene.

General Information			
Features	Compliance of Food Exposure		
Uses	overmolding Kitchen utensils Washer Non-specific food applications Container Consumer goods application field		
Agency Ratings	FDA 21 CFR 177.1210 2 Europe 10/1/2011 12:00 AM 2		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
Forms	Particle		
Processing Method	Extrusion Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.898	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 3 sec)	50		DIN 53505
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			DIN 53504
100% strain, 23°C	1.50	MPa	DIN 53504
300% strain, 23°C	2.50	MPa	DIN 53504
Tensile Strength			DIN 53504
Flow: fracture, 23°C	6.00	MPa	DIN 53504
Transverse flow: fracture, 23°C	12.9	MPa	DIN 53504
Tensile Elongation ¹			DIN 53504
Transverse flow: fracture, 23°C	650	%	DIN 53504
Flow: fracture, 23°C ²	450	%	DIN 53504
Fill Analysis	Nominal Value	Unit	Test Method

Apparent Viscosity (200°C, 11200 sec ⁻¹)	40.4	Pa · s	Internal method
Injection	Nominal Value	Unit	
Suggested Max Regrind	20	%	
Rear Temperature	193 - 204	°C	
Middle Temperature	199 - 216	°C	
Front Temperature	204 - 227	°C	
Nozzle Temperature	210 - 238	°C	
Processing (Melt) Temp	204 - 227	°C	
Mold Temperature	12.8 - 32.2	°C	
Back Pressure	0.00 - 0.552	MPa	
Screw Speed	50 - 100	rpm	

Injection instructions

Color concentrates based on polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) are most suitable for coloring GLS 422-126. 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 422-126 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 422-126 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: 1 to 3 in/sec. 1st Stage - Boost Pressure: 500 to 700 psi. 2nd Stage - Hold Pressure: 10 to 30% of Boost. Hold Time (Thick Part): 2 to 4 sec. Hold Time (Thin Part): 1 to 2 sec.

Extrusion	Nominal Value	Unit
Melt Temperature	204 - 227	°C
Die Temperature	216 - 238	°C

Extrusion instructions

Rear: 380-400F Center: 390-420F Front: 400-440F Screw: 100-500rpm

NOTE

1. Mouth die c
2. 2 hours

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