

PolyOne Versaflex™ CL2250 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

Material Notes:

Versaflex™ CL2250 is an easy processing compound designed for use in injection molding applications where FDA compliance, clarity and enhanced heat resistance are required. - Excellent Clarity - Overmold Adhesion to Polypropylene - Superior Colorability - Very Good Heat and Boil Resistance Color concentrates based on polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) are most suitable for coloring Versaflex™ CL2250. 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 Versaflex™ CL2250 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. Versaflex™ CL2250 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 Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Versaflex-CL2250-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	11800 cP	11800 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.0080 - 0.012 cm/cm	0.0080 - 0.012 in/in	ASTM D955
Melt Flow	13 g/10 min	13 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	50	50	10 sec; ASTM D2240
Tensile Strength at Break	5.52 MPa	801 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.52 MPa	220 psi	Die C2 hr; ASTM D412
	@Strain 100 %,	@Strain 100 %,	

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
	2.48 MPa	360 psi	
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	700 %	700 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	Die C2 hr; ASTM D412
Flexural Modulus	0.0139 GPa	2.02 ksi	ASTM D790
Tear Strength	24.5 kN/m	140 pli	ASTM D624
Compression Set	20 %	20 %	
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	171 - 188 °C	340 - 370 °F	
Middle Barrel Temperature	193 - 221 °C	379 - 430 °F	
Front Barrel Temperature	193 - 227 °C	379 - 441 °F	
Nozzle Temperature	210 - 227 °C	410 - 441 °F	
Melt Temperature	210 - 221 °C	410 - 430 °F	
Mold Temperature	12.8 - 37.8 °C	55.0 - 100 °F	
Back Pressure	0.000 - 0.552 MPa	0.000 - 80.1 psi	
Screw Speed	25 - 75 rpm	25 - 75 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1210	Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
	ISO 10993 Part 4	
	ISO 10993 Part 5	
	USP Class VI	
Appearance	Clear/Transparent	
Features	Good Colorability	
	Good Moldability	

Descriptive Properties	Good Processability Value	Comments
	Good Processing Stability	
	High Clarity	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Medical/Healthcare Applications	
	Overmolding	
	Pacifiers	
	Personal Care	
	Transparent or Translucent Parts	
	Transparent Parts	

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