

PolyOne Versaflex™ CL30 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

Material Notes:

Versaflex™ CL30 is an easy processing compound designed for use in injection molding and extrusion applications where water-clarity and excellent colorability are required. - Excellent Clarity - Excellent Colorability - Overmold Adhesion to Polypropylene - Soft TouchColor concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or polyethylene (PE) carriers are most suitable for coloring Versaflex™ CL30. 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 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). Regrind levels up to 20% can be used with Versaflex™ CL30 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. Drying is not Required Injection Speed: 1 to 5 in/sec 1st Stage - Boost Pressure: 400 to 1000 psi 2nd Stage - Hold Pressure: 30% of Boost Hold Time (Thick Part): 3 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-CL30-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	14800 cP	14800 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.021 - 0.025 cm/cm	0.021 - 0.025 in/in	ASTM D955
Melt Flow	18 g/10 min	18 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	110 g/10 min	110 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 200 °C	@Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	30	30	10 sec; ASTM D2240
Tensile Strength at Break	5.18 MPa	751 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.689 MPa	99.9 psi	

Tensile Strength Mechanical Properties	Metric @Strain 100 %, Temperature 23.0 °C	English @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412 Comments
	1.38 MPa	200 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	870 % @Temperature 23.0 °C	870 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	19.3 kN/m	110 pli	ASTM D624
Compression Set	11 % @Temperature 23.0 °C, Time 79200 sec	11 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 188 °C	320 - 370 °F	
Middle Barrel Temperature	177 - 199 °C	351 - 390 °F	
Front Barrel Temperature	182 - 227 °C	360 - 441 °F	
Nozzle Temperature	188 - 227 °C	370 - 441 °F	
Mold Temperature	15.6 - 37.8 °C	60.1 - 100 °F	
Back Pressure	0.000 - 0.862 MPa	0.000 - 125 psi	
Screw Speed	75 - 125 rpm	75 - 125 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA Unspecified Rating	
Appearance	Clear/Transparent	
Features	Good Colorability	
	High Clarity	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	

Regional Availability Descriptive Properties	Africa & Middle East Value	Comments
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Flexible Grips	
	Optical Applications	
	Overmolding	
	Soft Touch Applications	
	Transparent or Translucent Parts	

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