

## PolyOne Versaflex™ CL2003X Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

### Material Notes:

Versaflex™ CL2003X is an ultra-soft TPE designed for use in injection molding applications where exceptional clarity and ultra-soft properties are desired. New Product. Commercial specifications have not been established. - Tactile Feel - Ultra-Soft - Water ClarityColor concentrates with Versaflex™ CL2003 as the carrier are most suitable for coloring this product. If a Versaflex™ CL2003X color concentrate carrier is desired, it is important that the chosen color house have underwater pelletization capabilities. Typical loadings for color concentrates are from 1% to 5% by weight. Liquid color (pigment, not dye) can be used; white oil carriers are recommended. A high color match consistency can be obtained by using precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they lead to poor dispersion and can significantly change the hardness of the material. Concentrates based on PVC should not be used. 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™ CL2003X 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. The Versaflex™ CL2003X has good 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 5 - 8 minutes or longer. Drying is not Required Injection Speed: 0.5 to 2 in/sec 1st Stage - Boost Pressure: 80 to 300 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-CL2003X-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-Versaflex-CL2003X-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.868 g/cc	0.868 g/cc	ASTM D792
Viscosity	1300 cP	1300 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.049 - 0.053 cm/cm	0.049 - 0.053 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore OO	33	33	10 sec; ASTM D2240
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength at Break	0.896 MPa	130 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	0.0621 MPa	9.01 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	

Mechanical Properties	0.103 MPa Metric	14.9 psi English	Comments
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	Die C2 hr, ASTM D412
Elongation at Break	850 % @Temperature 23.0 °C	850 % @Temperature 73.4 °F	Die C2 hr, ASTM D412
Tear Strength	7.01 kN/m	40.0 pli	ASTM D624

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	110 - 127 °C	230 - 261 °F	
Middle Barrel Temperature	132 - 149 °C	270 - 300 °F	
Front Barrel Temperature	138 - 160 °C	280 - 320 °F	
Nozzle Temperature	143 - 171 °C	289 - 340 °F	
Melt Temperature	143 - 171 °C	289 - 340 °F	
Mold Temperature	12.8 - 32.2 °C	55.0 - 90.0 °F	
Back Pressure	0.000 - 0.345 MPa	0.000 - 50.0 psi	
Screw Speed	25 - 110 rpm	25 - 110 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA Unspecified Rating	
Appearance	Clear/Transparent	
Features	High Clarity	
	Soft	
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	

Descriptive Properties	North America Value	Comments
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Artificial Skin	
	Consumer Applications	
	Footwear	
	Personal Care	
	Toys	
	Transparent or Translucent Parts	

## Contact Songhan Plastic Technology Co.,Ltd.

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