

## PolyOne Versaflex™ CL2050 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

### Material Notes:

Versaflex™ CL2050 is an easy processing compound designed for use in applications where clarity and enhanced heat resistance are required. New Product. Commercial specifications have not been established. - Enhanced Heat Resistance - Excellent Colorability - Good Clarity - Overmold Adhesion to Polypropylene - Soft Touch  
 Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) carriers are most suitable for coloring Versaflex™ CL2050. 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™ CL2050 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: 100 to 500 psi 2nd Stage - Hold Pressure: 50% 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-CL2050-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-Versaflex-CL2050-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	7400 cP	7400 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.014 - 0.018 cm/cm	0.014 - 0.018 in/in	ASTM D955
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	130 g/10 min	130 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	51	51	10 sec; ASTM D2240
Tensile Strength at Break	4.96 MPa	719 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	1.59 MPa Metric	231 psi English	Comments
Tensile Stress	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	Die C2 hr, ASTM D412
	2.96 MPa	429 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	610 %	610 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tear Strength	22.8 kN/m	130 pli	ASTM D624
Compression Set	19 %	19 %	ASTM D395B
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	146 - 185 °C	295 - 365 °F	
Middle Barrel Temperature	154 - 193 °C	309 - 379 °F	
Front Barrel Temperature	166 - 204 °C	331 - 399 °F	
Nozzle Temperature	166 - 204 °C	331 - 399 °F	
Mold Temperature	21.1 - 32.2 °C	70.0 - 90.0 °F	
Back Pressure	0.345 - 1.03 MPa	50.0 - 149 psi	
Screw Speed	25 - 75 rpm	25 - 75 rpm	

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

Descriptive Properties	Value	Comments
Regional Availability	AFRICA & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Suggested Max Regrind	20%	

## Contact Songhan Plastic Technology Co.,Ltd.

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