

## PolyOne Versaflex™ HC MT555 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

### Material Notes:

Versaflex™ HC MT555 is an easy processing material designed for applications where FDA compliance and medical testing is required. - Excellent Colorability - Soft TouchRear: 340 - 360F Center: 380 - 400F Front: 390 - 410F Screw: 80 - 200 RPMsColor concentrates with polypropylene, ethylene vinyl acetate, or low density polyethylene carriers are most suitable for coloring Versaflex™ HC MT555. 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 an 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 or polypropylene. Regrind levels up to 20% can be used with Versaflex™ HC MT555 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™ HC MT555 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 5 in/sec 1st Stage - Boost Pressure: 100 to 800 psi 2nd Stage - Hold Pressure: 20% of Boost Hold Time (Thick Part): 4 to 10 sec Hold Time (Thin Part): 1 to 4 secInformation provided by PolyOne

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_PolyOne-Versaflex-HC-MT555-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-Versaflex-HC-MT555-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	13100 cP	13100 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	73000 cP	73000 cP	ASTM D3835
	@Shear Rate 1340 1/s, Temperature 200 °C	@Shear Rate 1340 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.016 - 0.022 cm/cm	0.016 - 0.022 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	54	54	10 sec; ASTM D2240
Tensile Strength at Break	6.38 MPa	925 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.74 MPa	252 psi	Die C2 hr; ASTM D412
	@Strain 100 %,	@Strain 100 %,	

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
	3.31 MPa	480 psi	
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	630 %	630 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	Die C2 hr; ASTM D412
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	166 - 182 °C	331 - 360 °F	
Middle Barrel Temperature	182 - 204 °C	360 - 399 °F	
Front Barrel Temperature	188 - 210 °C	370 - 410 °F	
Nozzle Temperature	188 - 210 °C	370 - 410 °F	
Die Temperature	193 - 204 °C	379 - 399 °F	
Melt Temperature	193 - 204 °C	379 - 399 °F	
	193 - 221 °C	379 - 430 °F	
Mold Temperature	15.6 - 26.7 °C	60.1 - 80.1 °F	
Back Pressure	0.000 - 0.552 MPa	0.000 - 80.1 psi	
Screw Speed	80 - 120 rpm	80 - 120 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1210	Please contact GLS Thermoplastic Elastomers for the specific FDA compliance letter on this product.
	ISO 10993 Part 4	
	ISO 10993 Part 5	
	USP Class VI	
Appearance	Translucent	
Features	Good Colorability	
	Good Processability	

Descriptive Properties	Good Processing Stability Value	Comments
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Extrusion	
	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	
	Personal Care	
	Transparent or Translucent Parts	
	Tubing	

## Contact Songhan Plastic Technology Co.,Ltd.

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