

## PolyOne Versaflex™ OM 1040X-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

### Material Notes:

The Versaflex™ OM 1040X-1 is a medical compliant overmolding TPE with very good adhesion to PC or ABS-based plastics. - Good Surface Aesthetics - Rubbery Feel - Soft Touch - Very Good Bond to PC, ABS, PC/ABSColor concentrates with EVA, polypropylene (PP) or LDPE carrier are most suitable for coloring Versaflex™ OM 1040X-1. Typical letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect on adhesion. A high color match consistency can be obtained by the use of precolored compounds available from GLS. 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™ OM 1040X-1 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™ OM 1040X-1 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 8 - 10 minutes or longer. Drying is not Required Injection Speed: 1 to 5 in/sec 1st Stage - Boost Pressure: 200 to 600 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-OM-1040X-1-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-Versaflex-OM-1040X-1-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.918 g/cc	0.918 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.020 - 0.026 cm/cm	0.020 - 0.026 in/in	ASTM D955
Melt Flow	9.0 g/10 min	9.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	16 g/10 min	16 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	42	42	10 sec; ASTM D2240
Tensile Strength at Break	3.47 MPa	503 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.24 MPa	180 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	
	2.08 MPa	302 psi	

Mechanical Properties	Metric @Strain 300 %, Temperature 23.0 °C	English @Strain 300 %, Temperature 73.4 °F	Die C2 hr: ASTM D412 Comments
Elongation at Break	580 % @Temperature 23.0 °C	580 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	17.5 kN/m	99.9 pli	ASTM D624
Compression Set	22 % @Temperature 23.0 °C, Time 79200 sec	22 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	166 - 188 °C	331 - 370 °F	
Middle Barrel Temperature	182 - 199 °C	360 - 390 °F	
Front Barrel Temperature	188 - 204 °C	370 - 399 °F	
Nozzle Temperature	193 - 216 °C	379 - 421 °F	
Melt Temperature	188 - 210 °C	370 - 410 °F	
Mold Temperature	21.1 - 32.2 °C	70.0 - 90.0 °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	
	ISO 10993 Part 4	
	ISO 10993 Part 5	
	USP Class VI	
Appearance	Translucent	
Features	Good Colorability	
	Good Moldability	
	Good Processability	
	Good Processing Stability	
	Good Surface Finish	
Forms	Pellets	

Descriptive Properties	Value	Comments
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	Flexible Grips	
	Medical/Healthcare Applications	
	Overmolding	
	Soft Touch Applications	
	Transparent or Translucent Parts	

## Contact Songhan Plastic Technology Co.,Ltd.

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