

## PolyOne Versalloy™ XL 9070-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

### Material Notes:

Versalloy™ XL 9070-1 is a TPV alloy with exceptional flow properties and surface aesthetics for a variety of applications. - Excellent Flow for Long, Thin Flow Paths - Exceptional Colorability - Overmold Adhesion to Polypropylene - Superior Surface Aesthetics Versalloy™ XL 9070-1 can be recycled as a filler or impact modifier for polyolefins, or can be recycled by grinding and reintroduction to the molding process. Similar to PP or PE recycling process, if separated appropriately, it can be recycled many times. Municipality waste stream recycle code is 7 which is designated for Other. Please contact GLS Thermoplastic Elastomers for a copy of our Recyclability Compliance letter. Color concentrates with polypropylene (PP) carrier are most suitable for coloring Versalloy™ XL 9070-1. 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. 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 Versalloy™ XL 9070-1 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. Versalloy™ XL 9070-1 has good melt stability. Empty the barrel for idle periods of fifteen (15) minutes or longer. Drying is not Required Injection Speed: 1 to 5 in/sec 1st Stage - Boost Pressure: 300 to 700 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-Versalloy-XL-9070-1-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-Versalloy-XL-9070-1-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	5800 cP	5800 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 - 0.020 cm/cm	0.014 - 0.020 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	70	70	10 sec; ASTM D2240
Tensile Strength at Break	5.43 MPa	788 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	2.48 MPa	360 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 21.0 °C	@Strain 100 %, Temperature 69.8 °F	
	3.53 MPa	512 psi	Die C2 hr; ASTM D412
	@Strain 300 %,	@Strain 300 %,	

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
Elongation at Break	580 % @Temperature 23.0 °C	580 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	31.5 kN/m	180 pli	ASTM D624
Compression Set	23 % @Temperature 23.0 °C, Time 79200 sec	23 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B
	42 % @Temperature 70.0 °C, Time 79200 sec	42 % @Temperature 158 °F, Time 22.0 hour	ASTM D395B
	53 % @Temperature 100 °C, Time 79200 sec	53 % @Temperature 212 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	149 - 188 °C	300 - 370 °F	
Middle Barrel Temperature	160 - 199 °C	320 - 390 °F	
Front Barrel Temperature	171 - 210 °C	340 - 410 °F	
Nozzle Temperature	171 - 210 °C	340 - 410 °F	
Mold Temperature	15.6 - 26.7 °C	60.1 - 80.1 °F	
Back Pressure	0.000 - 0.689 MPa	0.000 - 99.9 psi	
Screw Speed	50 - 100 rpm	50 - 100 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1210	Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
Appearance	Natural Color	
Features	Good Colorability	
	Good Flow	
	Good Surface Finish	
	Recyclable Material	
Forms	Pellets	

Generic Material Descriptive Properties	TPE 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	Consumer Applications	
	Overmolding	
	Soft Touch Applications	
	Thin-walled Parts	

## Contact Songhan Plastic Technology Co.,Ltd.

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