PolyOne Versalloy™ XL 9055-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Versalloy™ XL 9055-1 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 AestheticsVersalloy™ XL 9055-1 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 9055-1. 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. A high color match consistency can be obtained by the use of 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 Versalloy™ XL 9055-1 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 9055-1 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: 300 to 700 psi 2nd Stage - Hold Pressure: 70% of Boost Hold Time (Thick Part): 4 to 10 sec Hold Time (Thin Part): 1 to 3 secInformation provided by PolyOne

Order this product through the following link:
http://www.lookpolymers.com/polymer_PolyOne-Versalloy-XL-9055-1-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.888 g/cc	0.888 g/cc	ASTM D792
Viscosity	6200 cP @Shear Rate 11200 1/s, Temperature 200 °C	6200 cP @Shear Rate 11200 1/s, Temperature 392 °F	ASTM D3835
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	53	53	10 sec; ASTM D2240
Tensile Strength at Break	4.02 MPa @Temperature 23.0 °C	583 psi @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tensile Stress	1.45 MPa @Strain 100 %, Temperature 21.0 °C	210 psi @Strain 100 %, Temperature 69.8 °F	Die C2 hr; ASTM D412

Mechanical Properties	Metric	English	Comments
	2.31 MPa @Strain 300 %, Temperature 23.0 °C	335 psi @Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	610 % @Temperature 23.0 °C	610 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	21.0 kN/m @Temperature 21.0 °C	120 pli @Temperature 69.8 °F	Die C2 hr; ASTM D624
Compression Set	20 % @Temperature 23.0 °C, Time 79200 sec	20 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B
	38 % @Temperature 70.0 °C, Time 79200 sec	38 % @Temperature 158 °F, Time 22.0 hour	ASTM D395B
	43 % @Temperature 100 °C, Time 79200 sec	43 % @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	0.689 - 1.38 MPa	99.9 - 200 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	

Descriptive Properties	Value	Comments
	Recyclable Material	
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	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Overmolding	
	Soft Touch Applications	
	Thin-walled Parts	

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