

PolyOne Versaflex™ 9545-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Versaflex™ 9545-1 has 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 Color concentrates with polypropylene (PP) carrier are most suitable for coloring Versaflex™ 9545-1. 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 Versaflex™ 9545-1 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. Versaflex™ 9545-1 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-Versaflex-9545-1-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.988 g/cc	0.988 g/cc	ASTM D792
Viscosity	6500 cP	6500 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
	30000 cP	30000 cP	ASTM D3835
	@Shear Rate 1340 1/s, Temperature 200 °C	@Shear Rate 1340 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.0090 - 0.017 cm/cm	0.0090 - 0.017 in/in	ASTM D955
Melt Flow	3.6 g/10 min	3.6 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	21 g/10 min	21 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	45	45	10 sec; ASTM D2240

Mechanical Properties	2.76 MPa Metric	400 psi English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ASTM D412
Tensile Stress	0.931 MPa	135 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	
	1.86 MPa	270 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	630 %	630 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tear Strength	16.1 kN/m	91.9 pli	ASTM D624
Compression Set	20 %	20 %	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	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 Unspecified Rating	
Appearance	Natural Color	
Features	Good Colorability	
	Good Flow	
	Good Surface Finish	
Forms	Pellets	
Generic Material	TPE	

Descriptive Properties	Value	Thermoplastic Elastomer (TPE)	Comments
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		
	Flexible Grips		
	General Purpose		
	Overmolding		
	Soft Touch Applications		

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