Versaflex™ 9545-1

Thermoplastic Elastomer

Key Characteristics

Product Description

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

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Colorability	• Good Flow	• Good Surface Finish
Uses	• Consumer Applications • Flexible Grips	• General Purpose • Overmolding	• Soft Touch Applications
Agency Ratings	• FDA Unspecified Rating		
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.990	0.990	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	3.6 g/10 min	3.6 g/10 min	
200°C/5.0 kg	21 g/10 min	21 g/10 min	
Molding Shrinkage - Flow	9.0E-3 to 0.017 in/in	0.90 to 1.7 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	135 psi	0.931 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	270 psi	1.86 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	400 psi	2.76 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	630 %	630 %	ASTM D412
Tear Strength	92.0 lbf/in	16.1 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	20 %	20 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	45	45	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	30.0 Pa·s	30.0 Pa·s	
392°F (200°C), 11200 sec^-1	6.50 Pa·s	6.50 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	300 to 370 °F	149 to 188 °C
Middle Temperature	320 to 390 °F	160 to 199 °C
Front Temperature	340 to 410 °F	171 to 210 °C
Nozzle Temperature	340 to 410 °F	171 to 210 °C
Mold Temperature	60 to 80 °F	16 to 27 °C
Back Pressure	0.00 to 100 psi	0.00 to 0.689 MPa
Screw Speed	50 to 100 rpm	50 to 100 rpm

Injection Notes

Color concentrates with polypropylene (PP) carrier are most suitable for coloring Versalfex™ 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) mintes 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

Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr