Versaflex™ OM 1245X-1

Thermoplastic Elastomer

Key Characteristics

Product Description

The Versaflex™ OM 1245X-1 is designed for overmolding onto polycarbonate (PC), ABS, and PC/ABS susbstrates.

- Excellent Bond to PC, ABS, PC/ABS
- Rubbery Feel
- Soft Touch

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Processing Stability	• Soft	
Uses	• Consumer Applications • Electrical/Electronic Applications	• Flexible Grips • Overmolding	• Soft Touch Applications
Agency Ratings	• FDA		
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.970	0.970	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	1.0 to 12 g/10 min	1.0 to 12 g/10 min	
200°C/5.0 kg	45 to 65 g/10 min	45 to 65 g/10 min	
Molding Shrinkage - Flow	0.014 to 0.018 in/in	1.4 to 1.8 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	260 psi	1.79 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	507 psi	3.50 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	886 psi	6.11 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	490 %	490 %	ASTM D412
Compression Set (73°F (23°C), 22 hr)	31 %	31 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 10 sec, 73°F (23°C)	46	46	
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	13.0 Pa·s	13.0 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	110 to 115 °F	43 to 46 °C

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Injection	Typical Value (English)	Typical Value (SI)
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	< 0.030 %	< 0.030 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 380 °F	160 to 193 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	360 to 400 °F	182 to 204 °C
Nozzle Temperature	380 to 420 °F	193 to 216 °C
Processing (Melt) Temp	360 to 420 °F	182 to 216 °C
Mold Temperature	70 to 90 °F	21 to 32 °C
Back Pressure	0.00 to 125 psi	0.00 to 0.862 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

Injection Notes

Color concentrates with EVA, polypropylene (PP) or LDPE carrier are most suitable for coloring Versaflex™ OM 1245X-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 1245X-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 the regrind effectiveness should be determined by the customer.

Versaflex™ OM 1245X-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 5 - 8 minutes or longer.

Suggested Dewpoint: -40°F

Injection Speed: 1 to 3 in/sec
1st Stage - Boost Pressure: 100 to 800 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

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