Versaflex™ OM 1060X-1

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ OM 1060X-1 is an overmolding TPE with very good adhesion to PC or ABS-based plastics.

- Good Surface Aesthetics
- Rubbery Feel
- Soft Touch
- Very Good Bond to PC, ABS, PC/ABS

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability • Good Processability	• Good Processing Stability • Good Surface Finish	
Uses	• Consumer Applications	• Flexible Grips	• Overmolding
Agency Ratings	• FDA		
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	0.930	0.930	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	17 to 27 g/10 min	17 to 27 g/10 min	
200°C/5.0 kg	26 to 36 g/10 min	26 to 36 g/10 min	
Molding Shrinkage - Flow	0.010 to 0.016 in/in	1.0 to 1.6 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	310 psi	2.14 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	470 psi	3.24 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	595 psi	4.10 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	490 %	490 %	ASTM D412
Tear Strength	150 lbf/in	26.3 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	29 %	29 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	60	60	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	12.2 Pa·s	12.2 Pa·s	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	330 to 370 °F	166 to 188 °C
Middle Temperature	360 to 390 °F	182 to 199 °C
Front Temperature	380 to 440 °F	193 to 227 °C
Nozzle Temperature	410 to 460 °F	210 to 238 °C
Processing (Melt) Temp	380 to 430 °F	193 to 221 °C
Mold Temperature	70 to 100 °F	21 to 38 °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 or LDPE carrier are most suitable for coloring Versaflex™ OM 1060X-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 poypropylene (PP).

Regrind levels up to 20% can be used with Versaflex™ OM 1060X-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™ OM 1060X-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.

Drying is not Required

Injection Speed: 1 to 3 in/sec
1st Stage - Boost Pressure: 300 to 900 psi
2nd Stage - Hold Pressure: 30% of Boost
Hold Time (Thick Part): 3 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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