Versaflex™ OM 8940X-1 CLEAR

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ OM 8940X-1 CLEAR is a clear, soft touch TPE designed to bond to the following thermoplastics: PC, ABS, PC/ABS, copolyester and PKE.

- Excellent Adhesion to PC, ABS, PC/ABS, Copolyester, PKE
- Soft Touch Feel
- Water Clarity

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability	• High Clarity	
Uses	• Flexible Grips • Medical/Healthcare Applications	• Overmolding • Soft Touch Applications	
Agency Ratings	• FDA [1]	• ISO 10993-4	• ISO 10993-5
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.920	0.920	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	15 to 26 g/10 min	15 to 26 g/10 min	
200°C/5.0 kg	81 to 92 g/10 min	81 to 92 g/10 min	
Molding Shrinkage - Flow	4.0E-3 to 0.011 in/in	0.40 to 1.1 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (100% Strain, 73°F (23°C))	230 psi	1.59 MPa	ASTM D412
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	310 psi	2.14 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	1130 psi	7.76 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	1200 %	1200 %	ASTM D412
Tear Strength	140 lbf/in	24.5 kN/m	ASTM D624
Compression Set			ASTM D395B
73°F (23°C), 22 hr	20 %	20 %	
158°F (70°C), 22 hr	99 %	99 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	40	40	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	16.0 Pa·s	16.0 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 400 °F	182 to 204 °C
Front Temperature	380 to 410 °F	193 to 210 °C
Nozzle Temperature	380 to 410 °F	193 to 210 °C
Mold Temperature	70 to 80 °F	21 to 27 °C
Back Pressure	0.00 to 90.0 psi	0.00 to 0.621 MPa
Screw Speed	25 to 75 rpm	25 to 75 rpm

Injection Notes

Color concentrates with Versaflex™ OM 8940X-1 CLEAR as the carrier are most suitable for coloring this product. If an OM 8940X-1 CLEAR based color concentrate is desired, it is important that the chosen color house have underwater pelletization capabilities. Typical loadings for color concentrates are 1% to 5% by weight. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they lead to poor dispersion, loss of clarity and can significantly affect adhesion of the TPE to the substrate. Concentrates based on other TPEs 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) polystyrene (PS) or polypropylene (PP).

Regrind levels up to 20% can be used with Versaflex™ OM 8940X-1 CLEAR 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.

Drying is not Required

Injection Speed: 1 to 3 in/sec
1st Stage - Boost Pressure: 300 to 600 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] Please contact PolyOne GLS Thermoplastic Elastomers for a complete copy of the GLS Healthcare Policy.
1. The Customer must notify GLS of any FDA Class I and/or European Union Class I medical devices for each specific product and application.
2. The Customer shall not knowingly manufacture, use, sell or otherwise supply, directly or indirectly products or compounds made from GLS products in any of the following without prior written approval by GLS for each specific product or application:
a. Cosmetics
b. Drugs and other Pharmaceuticals
c. Temporary or permanent implantation in the human body, regardless of the intended duration of implantation
d. Class II and Class III Medical Devices as defined in 21 CFR 860.3 ("Medical Devices")
e. Class IIa, IIb and III as defined in Directive 93/42/EEC

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

[3] Die C

[4] 2 hr

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