Versaflex™ FFC 3883-70

Thermoplastic Elastomer

Key Characteristics

Product Description			
Versaflex™ FFC 3883-70 is designed to pass several food extraction and/or migration conditions identified in applicable U.S., Europe, and China food contact standards. Versaflex™ FFC 3883-70 would also overmold to PC, ABS, PC/ABS, Co-Polyesters.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific		
Features	• Food Contact Acceptable		
Uses	• Consumer Applications • Containers	• Gaskets • Kitchenware	• Non-specific Food Applications • Overmolding
Agency Ratings	• EU 10/2011 [1]	• FDA 21 CFR 177.2600 [2]	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [3]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.10	1.10	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [4, 5] (100% Strain, 73°F (23°C))	406 psi	2.80 MPa	ASTM D412
Tensile Stress [4, 5] (300% Strain, 73°F (23°C))	609 psi	4.20 MPa	ASTM D412
Tensile Strength [4, 5] (Break, 73°F (23°C))	1030 psi	7.10 MPa	ASTM D412
Tensile Elongation [4, 5] (Break, 73°F (23°C))	620 %	620 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	69	69	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	22.6 Pa·s	22.6 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	140 to 176 °F	60 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Regrind	20 %	20 %
Rear Temperature	329 to 374 °F	165 to 190 °C
Middle Temperature	347 to 410 °F	175 to 210 °C
Front Temperature	365 to 446 °F	185 to 230 °C
Nozzle Temperature	374 to 446 °F	190 to 230 °C
Processing (Melt) Temp	374 to 437 °F	190 to 225 °C
Mold Temperature	55 to 90 °F	13 to 32 °C

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Injection	Typical Value (English)	Typical Value (SI)
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa
Screw Speed	50 to 100 rpm	50 to 100 rpm

Injection Notes

Color concentrates based on ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) are most suitable for coloring Versaflex™ FFC 3883-70. 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. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value. 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).

Regrind levels up to 20% can be used with Versaflex™ FFC 3883-70 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™ FFC 3883-70 has fair 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.

Notes

[1] Please contact GLS Thermoplastic Elastomers for a copy of the EU compliance letter.

[2] Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

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

[4] Die C

[5] 2 hr

CONTACT INFORMATION

North America
Avon Lake, United States
33587 Walker Road
Avon Lake, OH, United States , 44012
+1 440 930 1000
+1 844 4AVIENT

South America
Sao Paulo, Brazil
Av. Francisco Nakasato, 1700
13295-000 Itupeva
Sao Paulo, Brazil
+55 11 4593 9200

Asia
Shanghai, China
2F, Block C
200 Jinsu Road
Pudong, 201206
Shanghai, China
+86 (0) 21 6028 4888

Europe
Pommerloch, Luxembourg
19 Route de Bastogne
Pommerloch, Luxembourg , L-9638
+352 269 050 35

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