Versaflex™ CL3000-80 US

Thermoplastic Elastomer

Key Characteristics

Product Description			
Versaflex CL3000-80 US is a thermoplastic elastomer formulation. Product will overmold onto PC, ABS, PC/ABS, and Copolyester.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Specialty Grade		
Uses	• Consumer Applications	• Overmolding	• Soft Touch Applications
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.12	1.12	ASTM D792
Molding Shrinkage - Flow	3.0E-3 to 8.0E-3 in/in	0.30 to 0.80 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	1200 psi	8.27 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	3150 psi	21.7 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	550 %	550 %	ASTM D412
Tear Strength [2, 3] (73°F (23°C))	530 lbf/in	92.8 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	25 %	25 %	ASTM D395
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	83	83	ASTM D2240
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Dielectric Constant			
73°F (23°C), 0.118 in (3.00 mm), 30.0 GHz	2.81	2.81	3rd Party Test Method
73°F (23°C), 5.00 in (127 mm), 30.0 GHz	2.84	2.84	3rd Party Test Method
73°F (23°C), 40.0 GHz	2.81	2.81	Internal Method
Dissipation Factor (73°F (23°C), 40.0 GHz)	0.041	0.041	Internal Method
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	165 Pa·s	165 Pa·s	

Legal Statement

Bags of Versaflex CL3000-80US should be left in the box with the top closed and not stored in direct sunlight.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	120 to 140 °F	49 to 60 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr

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Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Moisture	0.020 to 0.030 %	0.020 to 0.030 %
Rear Temperature	350 to 370 °F	177 to 188 °C
Middle Temperature	360 to 390 °F	182 to 199 °C
Front Temperature	370 to 420 °F	188 to 216 °C
Nozzle Temperature	380 to 430 °F	193 to 221 °C
Processing (Melt) Temp	380 to 425 °F	193 to 218 °C
Mold Temperature	55 to 130 °F	13 to 54 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa
Screw Speed	50 to 80 rpm	50 to 80 rpm

Injection Notes

Typical colorant 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. Contact GLS for more information on appropriate color concentrate base resins.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

Versaflex CL3000-80 US should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°F

Hot Runners: 380°F-440°F
Hot Tip: 380°F-450°F

Injection Speed: 0.5 to 2 in/sec
1st Stage - Boost Pressure: 500 to 1,000 psi
2nd Stage - Hold Pressure: 20-60% of Boost
Hold Time (Thick Part): 2 to 4 sec
Hold Time (Thin Part): 1 to 2 sec

Notes

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

[2] Die C

[3] 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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