Versaflex™ AA9-457C

Thermoplastic Elastomer

Key Characteristics

Product Description			
Versaflex™ CE 3620 is targeted for consumer electronics applications where abrasion resistance, UV resistance and enhanced feel are required. Versaflex™ CE 3620 can also overmold to a variety of substrates including PC,ABS, PC/ABS and Copolyester.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East	• Asia Pacific	• North America
Features	• Abrasion Resistant • Chemical Resistant • Good Colorability	• Good Processability • Low Friction • Paintable	• UV Resistant
Uses	• Appliances • Communication Applications • Computer Components • Consumer Applications	• Electrical/Electronic Applications • Flexible Grips • Overmolding • Soft Touch Applications	• Thick-walled Parts • Thin-walled Parts
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.00	1.00	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	2.0 to 15 g/10 min	2.0 to 15 g/10 min	
200°C/5.0 kg	25 to 35 g/10 min	25 to 35 g/10 min	
Molding Shrinkage - Flow	0.011 to 0.017 in/in	1.1 to 1.7 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain)	442 psi	3.05 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain)	618 psi	4.26 MPa	ASTM D412
Tensile Strength [2, 3] (Break)	1020 psi	7.03 MPa	ASTM D412
Tensile Elongation [2, 3] (Break)	630 %	630 %	ASTM D412
Tear Strength [2, 3]	232 lbf/in	40.6 kN/m	ASTM D624
Compression Set [4] (73°F (23°C), 22 hr)	18 %	18 %	ASTM D395
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	65	65	ASTM D2240
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flame Rating			UL 94
0.06 to 0.51 in (1.5 to 13.0 mm), All Colors	HB	HB	
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity (392°F (200°C))	19.4 Pa·s	19.4 Pa·s	ASTM D3835
Additional Information	**Typical Value (English)**	**Typical Value (SI)**	
Generic Material Type	Thermoplastic Elastomer	Thermoplastic Elastomer	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	125 to 140 °F	52 to 60 °C
Drying Time	1.0 to 3.0 hr	1.0 to 3.0 hr
Suggested Max Moisture	0.020 to 0.030 %	0.020 to 0.030 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 430 °F	182 to 221 °C
Front Temperature	370 to 440 °F	188 to 227 °C
Nozzle Temperature	380 to 460 °F	193 to 238 °C
Processing (Melt) Temp	380 to 450 °F	193 to 232 °C
Mold Temperature	55 to 110 °F	13 to 43 °C
Back Pressure	0.00 to 50.0 psi	0.00 to 0.345 MPa
Screw Speed	50 to 100 rpm	50 to 100 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 pre-colored 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).

Regrind levels of up to 20% can be used with Versaflex™ CE 3620 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™ CE 3620 should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°F

Injection Speed: 0.5 to 4 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

[4] 25% deflection

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