

Versaflex™ CE 3115

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ CE 3115 is targeted for consumer electronics applications where excellent abrasion resistance, chemical resistance and silky feel are required.

Versaflex™ CE 3115 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	• Latin America • North America	
Features	• Abrasion Resistant • Chemical Resistant • Good Colorability	• Good Processability • Low Friction • Pleasing Surface Appearance	• 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	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.17	1.17	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	1.0 to 12 g/10 min	1.0 to 12 g/10 min	
200°C/5.0 kg	15 to 25 g/10 min	15 to 25 g/10 min	
Molding Shrinkage - Flow (380°F (193°C))	9.0E-3 to 0.015 in/in	0.90 to 1.5 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress ^{2,3} (100% Strain, 73°F (23°C))	445 psi	3.07 MPa	ASTM D412
Tensile Stress ^{2,3} (300% Strain, 73°F (23°C))	740 psi	5.10 MPa	ASTM D412
Tensile Strength ^{2,3} (Break, 73°F (23°C))	2200 psi	15.2 MPa	ASTM D412
Tensile Elongation ^{2,3} (Break, 73°F (23°C))	640 %	640 %	ASTM D412
Tear Strength ^{2,3} (73°F (23°C))	300 lbf/in	52.5 kN/m	ASTM D624
Compression Set ⁴ (73°F (23°C), 22 hr)	24 %	24 %	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	

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Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec ⁻¹	16.0 Pa·s	16.0 Pa·s	ASTM D3835
Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
Mass Loss - 500 Cycle Abrasion Resistance ⁵ (73°F (23°C))	2.0 mg	2.0 mg	ASTM D3389

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	125 to 140 °F	52 to 60 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	< 0.030 %	< 0.030 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	360 to 410 °F	182 to 210 °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 85 °F	13 to 29 °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 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™ CE 3115 should not be left in the barrel for extended idle periods (greater than 5 minutes).

Suggested Dewpoint: -40°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

⁴ 25% deflection

⁵ Abrasion wheel: H-18

Mass Lost

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