

## CALIBRE™ 603-3 Polycarbonate Resin

### Overview

CALIBRE™ 603-3 is a branched polycarbonate resin specially designed for extrusion of profiles, corrugated sheet and very complex multi-wall sheet. CALIBRE™ 603-3 offers a very high melt strength to calibrate effectively the most complex multi-wall sheet structures, such as a seven wall sheet or more, and to calibrate effectively complex profiles and corrugated sheet. CALIBRE™ 603-3 contains a UV absorber additive, but note that sheets for outdoor applications also require a protective UV-absorbing cap layer. It is recommended to coextrude a 50 µm thick cap layer, using CALIBRE™ 320UV.

Main Characteristics:

- Very high melt strength
- Good impact resistance

Applications:

- Complex multi-wall sheet
- Profiles

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm <sup>3</sup>	1.20 g/cm <sup>3</sup>	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	3.0 g/10 min	3.0 g/10 min	ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ISO 294-4
Water Absorption			ISO 62
24 hr, 73°F (23°C)	0.15 %	0.15 %	
Equilibrium, 73°F (23°C), 50% RH	0.32 %	0.32 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-2/50
Tensile Stress			ISO 527-2/50
Yield	8990 psi	62.0 MPa	
Break	9570 psi	66.0 MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0 %	6.0 %	
Break	90 %	90 %	
Flexural Modulus <sup>1</sup>	334000 psi	2300 MPa	ISO 178
Flexural Stress <sup>1</sup>	13600 psi	94.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	7.6 ft·lb/in <sup>2</sup>	16 kJ/m <sup>2</sup>	
73°F (23°C)	26 ft·lb/in <sup>2</sup>	55 kJ/m <sup>2</sup>	
Notched Izod Impact Strength			ISO 180/A
-22°F (-30°C)	7.1 ft·lb/in <sup>2</sup>	15 kJ/m <sup>2</sup>	
73°F (23°C)	38 ft·lb/in <sup>2</sup>	80 kJ/m <sup>2</sup>	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Annealed	293 °F	145 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	259 °F	126 °C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	288 °F	142 °C	ISO 75-2/A
Vicat Softening Temperature	302 °F	150 °C	ISO 306/B50
CLTE - Flow	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2

<b>Electrical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Comparative Tracking Index 0.0787 in (2.00 mm), Solution A	250 V	250 V	IEC 60112
<b>Flammability</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Flame Rating <sup>2</sup>			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Glow Wire Flammability Index <sup>2</sup>			IEC 60695-2-12
0.04 in (1.0 mm)	1650 °F	900 °C	
0.08 in (2.0 mm)	1610 °F	875 °C	
0.12 in (3.0 mm)	1610 °F	875 °C	
Glow Wire Ignition Temperature <sup>2</sup>			IEC 60695-2-13
0.04 in (1.0 mm)	1430 °F	775 °C	
0.08 in (2.0 mm)	1430 °F	775 °C	
0.12 in (3.0 mm)	1430 °F	775 °C	
<b>Optical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Refractive Index	1.586	1.586	ISO 489
Transmittance	89.0 %	89.0 %	ASTM D1003
Haze	1.0 %	1.0 %	ASTM D1003

### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> 0.079 in/min (2.0 mm/min)

<sup>2</sup> This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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