

Specialty Glass Products Technical Reference Document

10/12

Borosilicate

SCHOTT Supremax® Rolled Borosilicate

Description

SCHOTT Supremax® 33 is identical in its properties to Borofloat 33, the only difference being slightly lower surface quality due to the rolled process. It is a versatile borosilicate glass with excellent thermal properties, chemical resistance, and good light transmission material of this thickness. Its unique properties make it desirable in many different applications. Supremax® 33 also maintains a low density compared to that of soda lime glass.

Features

- Large thickness range
- Very good optical properties
- Low thermal expansion
- High chemical durability
- Low density

Applications

High temperature windows for lighting
Photovoltaics
Optical windows, filters, and mirrors
Chemically resistant view ports
Bulletproof glass systems

Physical Properties

Mechanical

• Density (25°C) ρ	2.2 g/cm ³	137.3 lb/ft ³
• Young's Modulus E	64 kN/mm ²	9.28 Mpsi
• Poisson's Ratio μ	0.2	
• Knoop Hardness HK _{0.1/20}	480	
• Bending strength σ	25 MPa	3.63 x 10 ³ psi

Viscosity

• Working Point (10 ⁴ poises)	1270 °C	2318 °F
• Softening Point (10 ^{7.6} poises)	820 °C	1508 °F
• Annealing Point (10 ¹³ poises)	560 °C	1040 °F
• Strain Point (10 ^{14.5} poises)	518 °C	964 °F

Thermal Expansion

• 0 – 300 °C (32 – 572 °F)	3.25 x 10 ⁻⁶ /K
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Optical

• Index of Refraction @	435.8nm	1.4802
	479.9nm	1.4768
	546.1nm	1.4731
	589.3nm	1.4713
	643.8nm	1.4695
	656.3.3nm	1.4692

Electrical

• Log10 Volume Resistivity:	(250°C, 482°F)	8.0
	(350°C, 932°F)	6.5

Dimensions

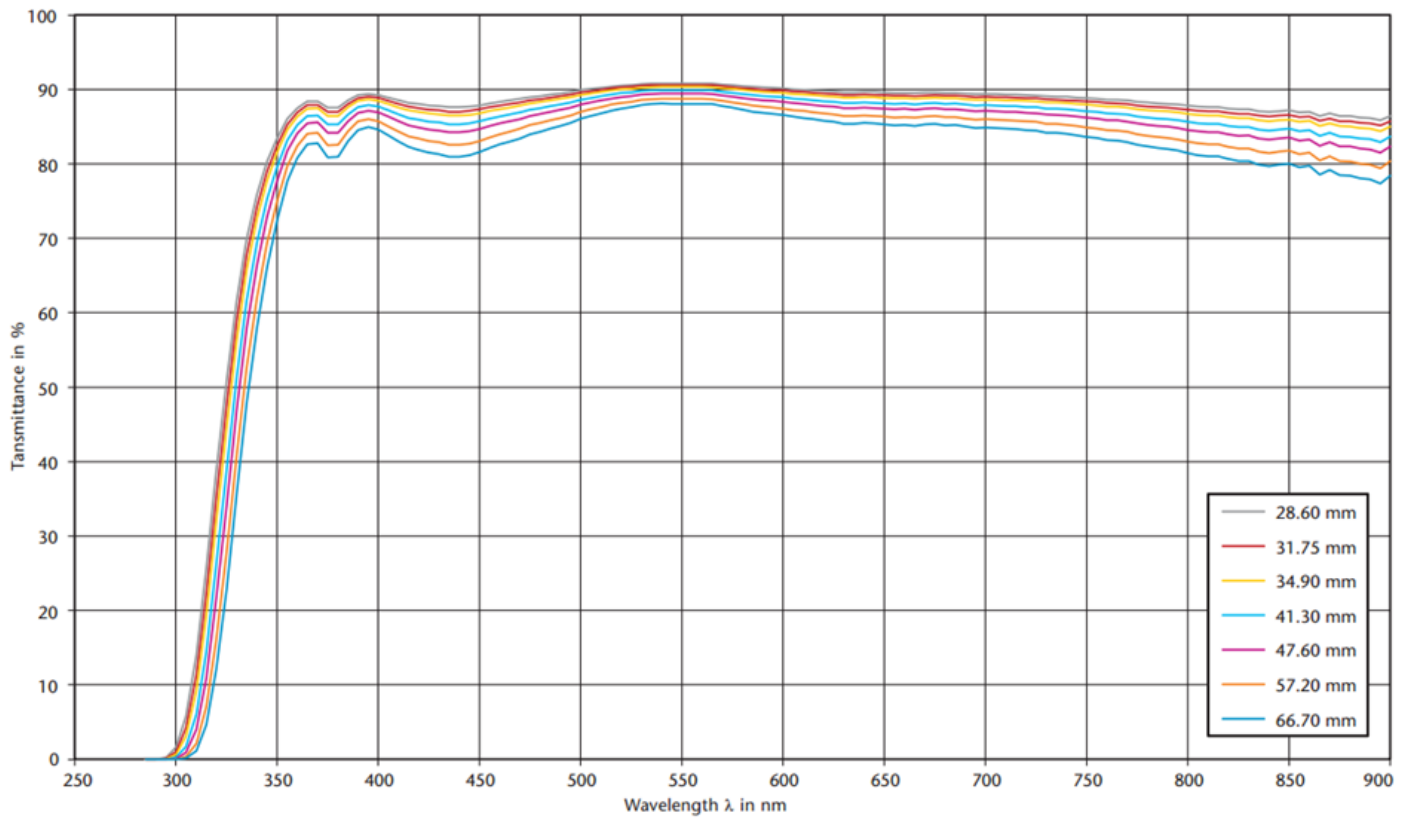
- Thicknesses: 28.6mm – 66.7mm
(1 1/8" – 2 5/8")
- Sizes: Up to 90" x 67"

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SCHOTT Supremax[®] Rolled Borosilicate (*cont.*)



Spectral Transmittance