

Specialty Glass Materials Products & Specifications

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Borosilicate

SCHOTT Supremax[®] Rolled Borosilicate

Description:

SCHOTT Supremax[®] Rolled Borosilicate is almost identical in its properties to Borofloat[®] 33, it has 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 for its thickness. Supremax[®] Rolled Borosilicate also maintains a low density and therefore higher transmissivity 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
- 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

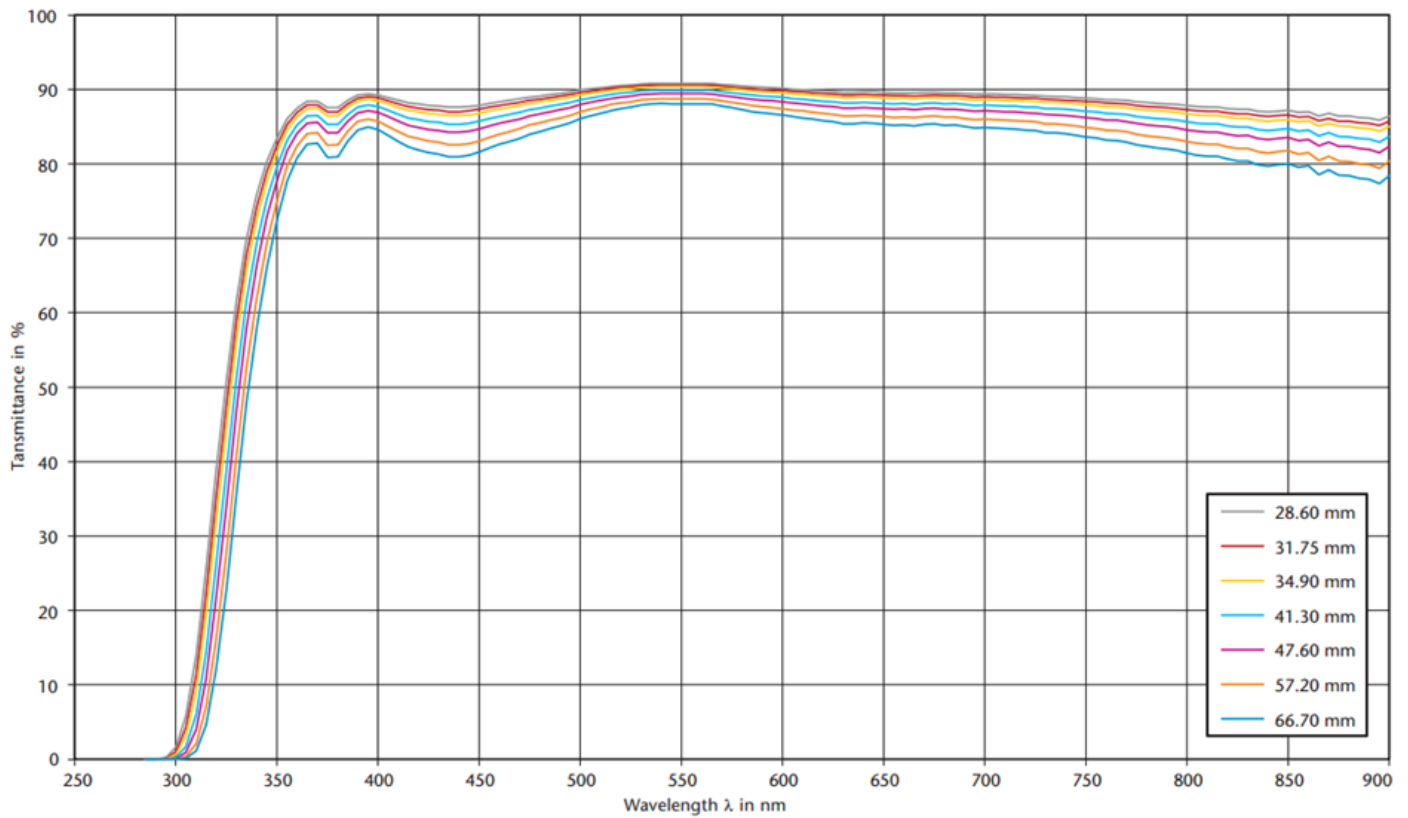
Dimensions:

- Thicknesses: 28.6mm – 66.7mm
(1 1/8" – 2 5/8")
- Sizes: Up to 90" x 67" (2286 x 1701.8")

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Spectral Transmittance