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) \( \rho \): 2.2 g/cm\(^3\), 137.3 lb/ft\(^3\)
- Young’s Modulus \( E \): 64 kN/mm\(^2\), 9.28 Mpsi
- Poisson’s Ratio \( \mu \): 0.2
- Knoop Hardness \( HK_{0.1/20} \): 480
- Bending strength \( \sigma \): 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

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 ⅛” – 2 ⅞”)
- Sizes: Up to 90” x 67” (2286 x 1701.8”)
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SCHOTT Supremax® Rolled Borosilicate (cont.)

*Spectral Transmittance*