Schott BOROFLOATÂ® Borosilicate Float Glass

Category : Ceramic , Glass , Optical , Oxide , Silicon Oxide

Material Notes:

This is a highly chemically resistant borosilicate glass with a low thermal expansion. BOROFLOATÂ® replaced TEMPAXÂ®, a drawn flat borosilicate glass for Schott. The high quality resulting from the float glass process opens up new applications for borosilicate flat glass in laboratories, chemical process plants and in the home appliance and lighting industries.BOROFLOATÂ® flat glass is highly resistant to water; neutral, acidic and saline solutions; as well as to chlorine, bromine, iodine and organic substances. Even over long periods of time and at high temperatures that exceed 100Â°C, BOROFLOATÂ® exceeds the chemical resistance of most metals and other materials.Information provided by SCHOTT North America.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Schott-BOROFLOAT-Borosilicate-Float-Glass.php

Physical Properties	Metric	English	Comments
Density	2.23 g/cc	0.0806 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Hardness, Knoop	480	480	HK 0.1/20; E DIN/ISO 9385
Modulus of Elasticity	63.0 GPa	9140 ksi	
Poissons Ratio	0.20	0.20	
Shear Modulus	26.3 GPa	3810 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	3.25 Âµm/m-Â°C @Temperature 20.0 - 300 Â°C	1.81 Âµin/in-Â°F @Temperature 68.0 - 572 Â°F	
Specific Heat Capacity	0.830 J/g-Â°C @Temperature 20.0 - 100 Â°C	0.198 BTU/lb-Â°F @Temperature 68.0 - 212 Â°F	
Thermal Conductivity	1.12 W/m-K @Temperature 90.0 Â°C	7.77 BTU-in/hr-ftÂ²-Â°F @Temperature 194 Â°F	
Maximum Service Temperature, Air	450 Â°C	842 Â°F	Long Term, depends on temperature gradient
	500 Â°C	932 Â°F	Short Term, depends on temperature gradient
Transformation Temperature, Tg	530 Â°C	986 Â°F	

Thermal Properties	Metric	English	Comments
Softening Point	815 Â°C	1500 Â°F	10^{7.6} dPa-s
Annealing Point	560 Â°C	1040 Â°F	10¹³ dPa-s

Optical Properties	Metric	English	Comments
Refractive Index	1.463 @Wavelength 1014 nm	1.463 @Wavelength 1014 nm	IR Hg
	1.472 @Wavelength 588 nm	1.472 @Wavelength 588 nm	n_d
	1.481 @Wavelength 435.8 nm	1.481 @Wavelength 435.8 nm	Blue Hg
	1.489 @Wavelength 365 nm	1.489 @Wavelength 365 nm	UV Hg
Transmission, Visible	92 % @Thickness 0.700 mm	92 % @Thickness 0.0276 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.10e+6 ohm-cm @Temperature 350 Â°C	3.10e+6 ohm-cm @Temperature 662 Â°F	
	1.00e+8 ohm-cm @Temperature 250 Â°C	1.00e+8 ohm-cm @Temperature 482 Â°F	
Dielectric Constant	4.6 @Frequency 1e+6 Hz	4.6 @Frequency 1e+6 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	50 Hz
Dissipation Factor	0.0037 @Frequency 1e+6 Hz	0.0037 @Frequency 1e+6 Hz	

Descriptive Properties	Value	Comments
Abbe Value	65.41	v_e
Dispersion	0.00719	n_F - n_C

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