Specialty Glass Materials
Products & Specifications 01/14

Borosilicate
Corning® Eagle XG® LCD Glass

Description:
Corning® Eagle XG® is a borosilicate glass specifically designed for high performance LCD's. It is considered environmentally friendly as it contains no heavy metals (arsenic, antimony, barium, or halides). The glass also features high surface quality, excellent thermal properties, low density, and high resistance to chemicals.

Features:
- Environmentally friendly (free of heavy metals)
- Excellent surface quality
- Good thermal properties
- Low density
- Chemical durability

Applications:
- Liquid crystal displays (LCDs)
- Lightweight optical windows

Physical Properties:

Mechanical:

Density (20°C, 68 °F)	2.38 g/cm^3	148.5 lb/ft^3
Young's Modulus	73.6 GPa	10.7Mpsi
Poisson's Ratio	0.23	0.23
Shear Modulus	0.1 GPa	4.4 Mpsi
Vickers Hardness (200 gm load, 25 sec dwell)	640	

Viscosity:

Working Point (10^4 poises)	1293°C	2359°F
Softening Point ($10^{7.6}$ poises)	971°C	1780°F
Annealing Point (10^{13} poises)	722°C	1332°F
Strain Point ($10^{14.5}$ poises)	669°C	1236°F

Thermal Expansion:

0 – 300°C (32 – 572°F)	31.7 x 10^{-7}/°C	17.7 x 10^{-7}/°F
Room Temperature to Setting Point 25 – 675°C (77 – 1247°F)	35.5 x 10^{-7}/°C	19.7 x 10^{-7}/°F

Optical:

Index of Refraction @	435.8nm	1.5198
	467.8nm	1.5169
	480.0nm	1.5160
	508.6nm	1.5141
	546.1nm	1.5119
	589.3nm	1.5099
	643.8nm	1.5078

- Birefringence Constant: (331 nm/cm)/(kg/mm^2)

Electrical:

Log10 Volume Resistivity:	(250°C, 482°F)	12.9
	(500°C, 932°F)	8.8

Dimensions:
- Thicknesses: 0.0433", 0.0275" (0.7mm, 1.1mm)
- Sizes: Up to 61" x 52" (1549.4 x 1320.8mm)

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Transmittance