Glass Type – Alkaline Earth Boro-Aluminosilicate

Corning® Eagle XG LCD Glass Free of Heavy Metals

Description
Corning Eagle XG is specifically designed for high performance LCD’s. It is also considered environmentally friendly as it contains no heavy metals (arsenic, antimony, barium, or halides). The lack of heavy metals helps this glass meet existing and future environmental regulations, thus providing a long term solution. The glass also features high surface quality, excellent thermal properties, low density, and high resistance to chemicals.

Features
- Environmentally friendly (no heavy metals)
- Excellent surface quality
- Good thermal properties
- Low density
- Chemical durability

Applications
- Liquid crystal displays
- Lightweight optical windows

Physical Properties

Mechanical
- Density (20 °C, 68 °F): 2.38 g/cm³, 148.5 lb/ft³
- Young’s Modulus: 73.6 GPa, 10.7 Mpsi
- Poisson’s Ratio: 0.23
- Shear Modulus: 0.1 GPa, 4.4 Mpsi
- Vickers Hardness (200 gm load, 25 sec dwell): 640

Viscosity
- Working Point (10⁴ poises): 1293 °C, 2359 °F
- Softening Point (10⁶ poises): 971 °C, 1780 °F
- Annealing Point (10⁵ poises): 722 °C, 1332 °F
- Strain Point (10¹⁴ poises): 669 °C, 1236 °F

Thermal Expansion
- 0 – 300 °C (32 – 572 °F): 31.7 x 10⁻⁶/°C, 17.7 x 10⁻⁶/°F
- Room Temperature to Setting Point 25 – 675 °C (77 – 1247 °F): 35.5 x 10⁻⁶/°C, 19.7 x 10⁻⁶/°F

Optical
- Index of Refraction @
  - 436.8nm: 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/mm²)

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

Transmittance

UV Transmission

Optical Transmission