

Specialty Glass Products Technical Reference Document

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Borosilicate

Corning® Eagle²⁰⁰⁰ Thin Glass

Description

Corning Eagle²⁰⁰⁰ is a lightweight borosilicate glass developed for as a substrate for AMLCD and similar applications. It is more chemical resistant than Corning 1737, and features low thermal expansion and low density. Other benefits include excellent transmission, flatness, and surface quality.

Features

- Low coefficient of thermal expansion
- Chemical durability
- Low density
- Lightweight
- Excellent optical properties

Applications

Substrate for AMLCD applications
High resolution displays
Sensor technology
Chip on Glass

Physical Properties

Mechanical

• Density (20 °C, 68 °F)	2.37 g/cm ³	147.9 lb/ft ³
• Young's Modulus	70.9 GPa	10.3Mpsi
• Poisson's Ratio	0.23	0.23
• Shear Modulus	28.9 GPa	4.2 Mpsi
• Vickers Hardness (200 gm load, 25 sec dwell)	642	

Viscosity

• Working Point (10 ⁴ poises)	1321 °C	2410 °F
• Softening Point (10 ^{7.6} poises)	985 °C	1805 °F
• Annealing Point (10 ¹³ poises)	722 °C	1332 °F
• Strain Point (10 ^{14.5} poises)	666 °C	1231 °F

Thermal Expansion

• 0 – 300 °C (32 – 572 °F)	31.8 x 10 ⁻⁷ /°C	17.7 x 10 ⁻⁷ /°F
• Room Temperature to Setting Point 25 – 670 °C (77 – 1238 °F)	36.1 x 10 ⁻⁷ /°C	20.1 x 10 ⁻⁷ /°F

Optical

• Index of Refraction @	435.8nm	1.5170
	480.0nm	1.5131
	486.1nm	1.5126
	546.1nm	1.5090
	589.3nm	1.5068
	643.8nm	1.5050
	656.3nm	1.5046
• Birefringence Constant	(327 nm/cm)/(kg/mm ²)	

Electrical

• Log10 Volume Resistivity:	(250°C, 482°F)	12.5
	(350°C, 662°F)	10.5
	(500°C, 932°F)	8.5

Dimensions

- Thicknesses: 0.5mm, 0.7mm
- Sizes: Up to 25" x 16"

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Transmittance

