## Description:

Eagle2000 ${ }^{\text {rm }}$ is a high temperature alkaline earth boro-aluminosilicate glass. It is made in a fusion drawn process which yields a very clean and smooth finish. The glass can withstand the rigorous, thermal cycles of the newer poly-silicate transistor processes. Eagle2000 ${ }^{\text {TM }}$ is more durable and even lighter than 1737F.

Available Thicknesses:
Thickness Tolerance

| 0.400 mm | $\pm 0.040 \mathrm{~mm}$ | $1160 \times 650 \mathrm{~mm}$ |
| :--- | :--- | :--- |
| 0.500 mm | $\pm 0.040 \mathrm{~mm}$ | $1160 \times 650 \mathrm{~mm}$ |
| 0.635 mm | $\pm 0.040 \mathrm{~mm}$ | $1160 \times 650 \mathrm{~mm}$. |
| 0.700 mm | $\pm 0.040 \mathrm{~mm}$ | $1160 \times 650 \mathrm{~mm}$ |
| 1.100 mm | $\pm 0.040 \mathrm{~mm}$ | $1160 \times 650 \mathrm{~mm}$ |

## Properties:

Refractive Index: $n_{d}(\lambda=589 \mathrm{~nm})=1.5068$

## Transmission: (estimated at 0.7 mm thick)

| $@ 250 \mathrm{~nm}$ | $4 \%$ | $@ 340 \mathrm{~nm}$ | $80 \%$ |
| :--- | :---: | :---: | :---: |
| @300nm | $40 \%$ | $@ 396-2500 \mathrm{~nm}$ | $90 \%+$ |
| $@ 320 \mathrm{~nm}$ | $64 \%$ |  |  |


| Mechanical and Thermal: |  |
| :--- | :--- |
| Density | $2.37 \mathrm{~g} / \mathrm{cm}^{3}$ |
| Young's Modulus | $7.09 \times 10^{3} \mathrm{~kg} / \mathrm{mm}^{2}$ |
| Thermal Coefficient of Expansion $\left(0-300^{\circ} \mathrm{C}\right)=31.8 \times 10^{-7}$ |  |
| Strain Point | $666^{\circ} \mathrm{C}$ |


| Chemical: |  |
| :--- | :---: |
| Solution / Time / Temp. | Weight Loss $\left(\mathrm{mg} / \mathrm{cm}^{2}\right)$ |
| $5 \% \mathrm{HCL} / 24$ hrs. $/ 95^{\circ} \mathrm{C}$ | 0.3 |
| D.I. $\mathrm{H}_{2} \mathrm{O} / 24$ hrs. $/ 95^{\circ} \mathrm{C}$ | 0.00 |
| $10 \% \mathrm{HF} / 20 \mathrm{~min} . / 22^{\circ} \mathrm{C}$ | 3.71 |
| $10 \% \mathrm{NH}_{4} \mathrm{~F} \cdot \mathrm{HF} / 20 \mathrm{~min} . / 22^{\circ} \mathrm{C}$ | 0.75 |
| $5 \% \mathrm{NaOH} / 6$ hrs. $/ 95^{\circ} \mathrm{C}$ | 1.61 |
| $.02 \mathrm{~N} \mathrm{Na}_{2} \mathrm{CO}_{3} / 6$ hrs. $/ 95^{\circ} \mathrm{C}$ | 0.14 |

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## Electrical:

Dielectric Constant @20º $; 1 \mathrm{KHz} 5.181$
Dielectric Loss Factor @ $20^{\circ} \mathrm{C} ; 1 \mathrm{KHz}$
0.40\%

## Applications:

Eagle2000 ${ }^{\text {TM }}$ is often used as substrates for Active Matrix flat panel displays, thin film coatings, and in low alkali substrate applications.

Flatness, parallelism, cutting tolerances, roughness, cosmetic defects and visual inspection all conform to the specifications to be agreed upon by Precision Glass \& Optics and the customer.


