

Precision Electronic Glass, Inc.

Comparative Values Of Borosilicate Glasses

Glass Code	7740	8330	KG-33	3.3
Source	Corning	Schott	Kimble	Kavalier
Trade Name	Pyrex	Duran	Kimax	SIMAX
Expansion $10^{-7} / ^\circ\text{C}$	32.5	33	32	33
Strain Pt $^\circ\text{C}$	510	525	513	510
Annealing Pt $^\circ\text{C}$	560	560	565	560
Softening Pt $^\circ\text{C}$	821	820	827	820
Working Pt $^\circ\text{C}$	1252	1260	1255	1260
Density gms / cm^3	2.23	2.23	2.23	2.23
Vol. Rest Log 10				
@ 250 $^\circ\text{C}$ Ω / cm	8.1	8.0	7.9	-
@ 350 $^\circ\text{C}$ Ω / cm	6.6	6.5	6.4	-
Dielectric 1M H_2	@ 20 $^\circ\text{C}$	@ 25 $^\circ\text{C}$	@ 25 $^\circ\text{C}$	@ 20 $^\circ\text{C}$
K	4.6	4.6	4.6	4.6
Loss Factor 1%	2.6	-	2.2	-
Refractive Index	1.474	1.473	1.47	1.472
Loss Factor $\tan \delta$	-	37×10^{-4}	-	-
Stress Optical Coef.				
$10^{-6} \text{mm}^2 / \text{N}$	3.94	4.0	3.7	3.6
Melt Availability	Continuous melt (6-18 week cycles)			

Composition	7740	8330	KG-33	3.3
App. Weight%	Corning	Schott	Kimble	Kavalier
	Pyrex	Duran	Kimax	SIMAX
SiO_2	80.6	81.0	80.0	80.4
B_2O_3	13.0	13.0	13.0	13.0
$\text{Na}_2\text{O}+\text{K}_2\text{O}$	4.0	4.0	4.0	4.2
Al_2O_3	2.3	2.0	3.0	2.4

This form should only be used for reference purposes. Data for design and product application should be taken from the respective company's published technical glass data.