

Glass 8245

Technical Data

Glass Type/Application	Borosilicate glass for sealing to KOVAR alloy and molybdenum, good x-ray transmission. X-ray tube and photomultiplier tube.		
Physical Data (approx. value)	Coefficient of mean linear thermal expansion $\alpha(20^{\circ}\text{C}; 300^{\circ}\text{C})$ (ISO 7991)	5.1	10^{-6}K^{-1}
	Transformation temperature T_g (ISO 7884-8)	505	$^{\circ}\text{C}$
	Glass temperature at viscosity η in dPa·s		
	10^{13} (annealing point) (ISO 7884-4)	515	$^{\circ}\text{C}$
	$10^{7.6}$ (softening point) (ISO 7884-3)	720	$^{\circ}\text{C}$
	10^4 (working point) (ISO 7884-2)	1040	$^{\circ}\text{C}$
	Stress-optical coefficient K (DIN 52314)	3.8	$10^{-6}\text{mm}^2\cdot\text{N}^{-1}$
	Density ρ at 25°C	2.31	$\text{g} \cdot \text{cm}^{-3}$
	Modulus of elasticity E (Young's modulus)	68	$10^3\text{N} \cdot \text{mm}^{-2}$
	Poisson's ratio μ	0.22	
	Thermal conductivity λ_w at 90°C	1.2	$\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$
	Log of the electric volume resistivity ($\Omega\cdot\text{cm}$)		
	at 250°C	7.4	
	at 350°C	5.9	
	t_{k100} (DIN 52326)	215	$^{\circ}\text{C}$
	Dielectric constant ϵ for 1 MHz at 25°C	5.7	
Dielectric loss factor $\tan d$ for 1 MHz at 25°C	80	10^{-4}	
Refractive index n_d ($\lambda = 587.6 \text{ nm}$)	1.488		
Chemical Resistance	Hydrolytic resistance (ISO 719)	Class	HGB 3
	Acid resistance (DIN 12116)	Class	S4
	Alkali resistance (ISO 695)	Class	A3
The heavy metal content for the elements lead, cadmium, mercury and hexavalent chromium is below 100 ppm.			