

Glass 8250

Technical Data

GlassType/Application Borosilicate glass for sealing to KOVAR metal and molybdenum, electrically highly insulating
X-ray tubes, transmitting tubes, image amplifier tubes, He-Ne-laser, clad tube for optical fibres, ozone generators

Physical Data (approx. value)	Coefficient of mean linear thermal expansion		
	$\alpha(20^{\circ}\text{C}; 300^{\circ}\text{C})$ (ISO 7991)	5.0	10^{-6}K^{-1}
	Transformation temperature T_g (ISO 7884-8).....	490	$^{\circ}\text{C}$
	Glass temperature at viscosity η in $\text{dPa}\cdot\text{s}$		
	10^{13} (annealing point) (ISO 7884-4).....	500	$^{\circ}\text{C}$
	$10^{7.6}$ (softening point) (ISO 7884-3).....	720	$^{\circ}\text{C}$
	10^4 (working point) (ISO 7884-2).....	1055	$^{\circ}\text{C}$
	Stress-optical coefficient K (DIN 52314).....	3.6	$10^{-6}\text{mm}^2\cdot\text{N}^{-1}$
	Density ρ at 25°C	2.28	$\text{g}\cdot\text{cm}^{-3}$
	Modulus of elasticity E (Young's modulus)	64	$10^3\text{N}\cdot\text{mm}^{-2}$
	Poisson's ratio μ	0.21	
	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 25°C	10.0	
	at 350°C	8.3	
	t_{k100}	375	$^{\circ}\text{C}$
	Dielectric constant ϵ for 1 MHz at 25°C	4.9	
	Dielectric loss factor $\tan \delta$ for 1 MHz at 25°C	22	10^{-4}
	Refractive index n_d ($\lambda = 587.6 \text{ nm}$)	1.487	

Chemical Resistance	Hydrolytic resistance (ISO 719)		
	Class	HGB 3	
	Acid resistance (DIN 12116)		
	Class	S 4	
	Alkali resistance (ISO 695)		
	Class	A 3	

The heavy metal content for the elements lead, cadmium, mercury and hexavalent chromium is below 100 ppm