Glass 8250

Technical Data

Glass Type/Application	Borosilicate glass for sealing to KOVAR alloy and molybdenum, electrically higly 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 α(20°C; 300°C) (ISO 7991)	5.0	$10^{-6}K^{-1}$
	Transformation temperature T_g (ISO 7884-8)	490	°C
	Glass temperature at viscosity η in dPa·s		
	10^{13} (annealing point) (ISO 7884-4)	500	°C
	$10^{7.6}$ (softening point) (ISO 7884-3)	720	°C
	10^{4} (working point) (ISO 7884-2)	1055	°C
	Stress-optical coefficient K (DIN 52314)	3.6	$10^{-6}mm^2 \cdot N^{-1}$
	Density ρ at 25°C	2.28	$g \cdot cm^{-3}$
	Modulus of elasticity E (Young's modulus)	64	$10^3 N \cdot mm^{-2}$
	Poisson's ratio μ	0.21	
	Thermal conductivity λ_w at 90°C	1.2	$W \cdot m^{-1} \cdot K^{-1}$
	Log of the electric volume resistivity (Ω·cm)		
	at 250°C	10.0	
	at 350°C	8.3	
	t_{k100} (DIN 52326)	375	°C
	Dielectric constant ε for 1 MHz at 25°C	4.9	
	Dielectric loss factor tan d for 1 MHz at 25°C	22	10^{-4}
	Refractive index n_d (λ = 587.6 nm)	1.487	
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.