

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	
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 $10^3N \cdot mm^{-2}$
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 ($\Omega \cdot cm$)	
at 250°C	10.0
at 350°C	8.3
t_{k100}	375 °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 ($\lambda = 587.6$ 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