

# Glass 8242

## Technical Data

GlassType/Application	Borosilicate glass for sealing to KOVAR metal and molybdenum electrically highly insulating Clad tube for optical fibres, glass metal sealing
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Physical Data (approx. value)	Coefficient of mean linear thermal expansion		
	$\alpha(20^{\circ}\text{C}; 300^{\circ}\text{C})$ (ISO 7991) .....	4.7	$10^{-6}\text{K}^{-1}$
	Transformation temperature $T_g$ (ISO 7884-8).....	465	$^{\circ}\text{C}$
	Glass temperature at viscosity $\eta$ in $\text{dPa}\cdot\text{s}$		
	$10^{13}$ (annealing point) (ISO 7884-4).....	480	$^{\circ}\text{C}$
	$10^{7.6}$ (softening point) (ISO 7884-3).....	715	$^{\circ}\text{C}$
	$10^4$ (working point) (ISO 7884-2).....	1130	$^{\circ}\text{C}$
	Stress-optical coefficient $K$ (DIN 52314).....	-	$10^{-6}\text{mm}^2\cdot\text{N}^{-1}$
	Density $\rho$ at $25^{\circ}\text{C}$ .....	2.27	$\text{g}\cdot\text{cm}^{-3}$
	Modulus of elasticity $E$ (Young's modulus) .....	-	$10^3\text{N}\cdot\text{mm}^{-2}$
	Poisson's ratio $\mu$ .....	-	
	Thermal conductivity $\lambda_w$ at $90^{\circ}\text{C}$ .....	-	$\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$
	Log of the electric volume resistivity ( $\Omega\cdot\text{cm}$ )		
	at $250^{\circ}\text{C}$ .....	-	
	at $350^{\circ}\text{C}$ .....	-	
	$t_{k100}$ .....	-	$^{\circ}\text{C}$
Dielectric constant $\epsilon$ for 1 MHz at $25^{\circ}\text{C}$ .....	-		
Dielectric loss factor $\tan \delta$ for 1 MHz at $25^{\circ}\text{C}$ .....	-	$10^{-4}$	
Refractive index $n_d$ ( $\lambda = 587.6 \text{ nm}$ ) .....	1.480		

Chemical Resistance	Hydrolytic resistance (ISO 719) .....	Class	HGB 2
	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