

Glass 8245

Technical Data

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|----------------------------------|---|-------|--|
| GlassType/Application | Borosilicate glass for sealing to KOVAR metal and molybdenum, minimum X-ray absorption X-ray tubes, video-frequency tubes, photomultiplier tubes | | |
| 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 $\text{dPa}\cdot\text{s}$ | | |
| | 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} | 215 | $^{\circ}\text{C}$ |
| | Dielectric constant ϵ for 1 MHz at 25°C | 5.7 | |
| | Dielectric loss factor $\tan \delta$ 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 | 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 | | |

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Business Unit Tubing / 9/2017