

Glass Type/Application	soda-lime glass Pharmaceutical primary packaging, general technical application	
Physical Data (approx. value)	Coefficient of mean linear thermal expansion $\alpha(20^{\circ}\text{C}; 300^{\circ}\text{C})$ acc. to ISO 7991 ..... $9.1 \cdot 10^{-6} \text{K}^{-1}$ Transformation Temperature $T_g$ ..... $525 \text{ }^{\circ}\text{C}$ Glass temperature at viscosity $\eta$ in $\text{dPa} \cdot \text{s}$ $10^{13}$ (annealing point)..... $530 \text{ }^{\circ}\text{C}$ $10^{7.6}$ (softening point) ..... $720 \text{ }^{\circ}\text{C}$ $10^4$ (working point) ..... $1040 \text{ }^{\circ}\text{C}$ Density $\rho$ at $25^{\circ}\text{C}$ ..... $2.50 \text{ g} \cdot \text{cm}^{-3}$	
Chemical Data	Hydrolytic resistance acc. to ISO 719 ..... Class HGB 3 acc. to Ph. Eur. .... Type III acc. to USP..... Type III  Acid resistance (DIN 12116) ..... Class S 1 Alkali resistance (ISO 695) ..... Class A 2  ASTM E 438 ..... Type II	
Chemical Composition (main components in approx. weight %)	SiO <sub>2</sub> B <sub>2</sub> O <sub>3</sub> Al <sub>2</sub> O <sub>3</sub> Na <sub>2</sub> O K <sub>2</sub> O BaO CaO MgO 69 1 4 13 3 2 5 3 The heavy metal content for the elements lead, cadmium, mercury and hexavalent chromium is below 100 ppm.	

Transmission  
(exemplary spectrum)

