



Glass and Polymer
Technologies

Schott D 263 T Borosilicate Glass

D 263 T is a borosilicate glass that is highly resistant to chemical attack.

Main D 263 T Characteristics

- Low alkali content
- Excellent chemical resistance
- High luminous transmission
- Excellent flatness
- Fire-polished surfaces

Dimensions

- Maximum dimensions: 440 mm (17.32") by 360 mm (14.17")
- Thicknesses: 0.03 mm to 1.1 mm, not all thicknesses are available from stock

Thermal Properties

- Coefficient of Thermal Expansion (Static Measurement, 20-300° C.)
- $7.2 \times 10^{-6} \text{ }^\circ\text{K}$

Viscosity Temperature

- Designation log η [dPas] [° C]
- Strain Point 14.5 529
- Annealing Point 13.0 557
- Softening Point 7.6 736
- Transformation Temperature 557

Mechanical Properties

- Density ρ (annealed @ 40° C/h) 2.51 (g/cm³)
- Stress Optical Coefficient C 3.4 (1.02 x 10⁻¹² m²/N)
- Young's Modulus E 72.9 (kN/mm²)
- Poisson's Ratio ν 0.208
- Torsion Modulus G 30.1 (kN/mm²)
- Knoop Hardness HK₁₀₀ 590

HP-BOROSILICATE
GLASS
POLYMER

Chemical Properties

- Hydrolytic Resistance according to DIN ISO 719
- Hydrolytic Class HGB 1
- Equivalent Alkali (Na₂O) per gram of glass grains 20 (g/g)
- Acid Resistance according to DIN 12116
- Acid Class 2
- Half surface weight loss
- after 6 hours 1.4 (mg/dm²)
- Acid Resistance according to DIN ISO 695
- Class A 2
- Surface weight loss
- After 3 hours 88 (mg/dm²)

Electrical Properties

- Dielectric Constant (Permissivity) ϵ_r 6.7 (@ 1 MHz)
- Dissipation Factor $\tan \delta$ 61×10^{-4} (@ 1 MHz)
- Electrical Volume Resistivity ρ_D (DC)
- @ $T = 250^\circ \text{C}$ 1.6×10^8 (cm)
- @ $T = 350^\circ \text{C}$ 3.5×10^6 (cm)

Optical Properties

- Refractive Indices
- n_g 1.5354
- n_F 1.5305
- n_D 1.5300
- n_e 1.5255 +/- 0.0015
- n_d 1.5231
- n_D 1.5230
- n_C 1.5209
- n_c 1.5204
- Abbe Value
- v_e 55
- Transmission
- Individual values t_λ (Thickness of material = 1.1 mm)
- @ 380 nm 89.8 %
- @ 632.8 nm 91.8 %
- @ 1064 nm 92 %

