

Specialty Glass Materials Products & Specifications

01/14

Borosilicate

SCHOTT Duran® Lab Glass (Tubed)

Description:

SCHOTT Duran® is general-purpose borosilicate glass tubing. Duran® has identical chemical and thermal properties as Schott's Borofloat® 33, as it is made from the same material. Duran's high resistance to chemicals and heat makes it ideal for laboratory glassware.

Features:

- Excellent thermal properties
- Highly resistant to chemicals
- Very good transmission properties

Applications:

- Lab glassware
- Pipelines
- Chemical industry
- Flameproof tubes
- Flowmeters

Physical Properties:

Mechanical:

• Density (25°C) ρ	2.2 g/cm ³	137.3 lb/ft ³
• Young's Modulus E	64 kN/mm ²	9.28 Mpsi
• Poisson's Ratio μ	0.2	0.2
• Knoop Hardness HK _{0.1/20}	480	480
• Bending strength σ	25 MPa	3.63 x 10 ³ psi

Viscosity:

• Working Point (10 ⁴ poises)	1260°C	2300°F
• Softening Point (10 ^{7.6} poises)	825°C	1517°F
• Annealing Point (10 ¹³ poises)	560°C	1040°F
• Strain Point (10 ^{14.5} poises)	518°C	964°F

Thermal Expansion:

• 0 – 300°C (32 – 572°F)	3.25 x 10 ⁻⁶ /K
--------------------------	----------------------------

Optical:

• Index of Refraction @	435.8nm	1.4802
	479.9nm	1.4768
	546.1nm	1.4731
	589.3nm	1.4713
	643.8nm	1.4695
	656.3.3nm	1.4692

Electrical:

• Log ₁₀ Volume Resistivity: (250°C, 482°F)	8.0
(350°C, 932°F)	6.5

Dimensions:

• Smallest size:	Outer Diameter: 3mm (0.118")	Wall Thickness: 0.7mm (0.028")	Length: 17mm (0.669")
• Largest size:	325mm (12.795")	10mm (0.394")	150mm (5.9")

Specialty Glass Materials Products & Specifications 01/14

Borosilicate
 SCHOTT Duran® Lab Glass -Tubed (cont.)

Transmission

