
TK04 - Reference Standards

Physical properties of the TK04 reference standards

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General

The specified thermal conductivities are approximate values. Each standard is calibrated individually before delivery and is labeled with its exact thermal conductivity value. Dimensions may vary slightly. Other sizes are available on request

Reference standard ST 1.6

ST 1.6 is a glass ceramic material.

Physical properties	
Thermal conductivity	1.6 W m ⁻¹ K ⁻¹
Maximum operation temperature	700°C
Density	2,66 g cm ⁻³
Porosity	0
Coefficient of expansion (20-400°C)	9,5 · 10 ⁻⁶ K ⁻¹
Dielectric strength	12 kV mm ⁻¹
Dielectric constant (20°C; 1 MHz)	14
Volume resistivity (20°C)	4 · 10 ¹² Ω cm

Available dimensions	
for half-space and full-space probes	~ 110 x 90 x 55 mm (with drill hole, ø 2 mm)
for half-space probes	~ 110 x 90 x 30
for full-space probes	~ 55 x 55 x 90 mm (with drill hole, ø 2 mm)

Reference standard ST 0.2

ST 0.2 is made of acrylic glass.

Physical properties	
Thermal conductivity	$0.2 \text{ W m}^{-1} \text{ K}^{-1}$
Maximum operation temperature	80°C
Density	$1,18 \text{ g cm}^{-3}$
Compressive strength	120 N mm^2
Tensile strength	80 N mm^2
Bending strength	135 N mm^2
Modulus of elasticity	3300
Dielectric strength	30 kV mm^{-1}
Water absorption	0.05 %

Available dimensions	
for full-space probes	$\varnothing 60 \text{ mm}$, H $\sim 90 \text{ mm}$ (with drill hole, $\varnothing 2 \text{ mm}$)