

- HEATING
- INSULATION
- MEASURING
- FIRING & MELTING



DIN EN ISO 9001
Zertifikat Nr. 71 100 G 016



M.E.SCHUPP® - THERMOTUBE

High Alumina Tubes from 1,500°C up to 1,800°C

Introduction

ThermoTubes are for protecting and insulating thermocouples and for gas inlet and outlet. Externally grooved tubes and tubes with special provision for heater windings are for electrically heated furnaces. Diffusion tubes are for the semiconductor industry.

Tubes, which are used for protection sheath of thermocouples (Pt/Rh) are against detrimental influences of environment and insulation of thermocouple wires. Working temperature recommended: 1,800°C max. (depends on working medium and tube setting in furnace/kiln). We supply according to German standard for tolerances (DIN 40680 - coarse). The exact permissible deviations you can get on request.

Material properties

| Type DIN/VDE 0335 | C 799 | C 795 | C 780 | C 610 (Mullite) |
|------------------------------------|--|--|--|--|
| Maximum Temperature (°C) | 1800 | 1650 | 1600 | 1500 |
| Al ₂ O ₃ (%) | 99.3 | 95 | 85 | 60 |
| Bulk Density (g/cm ³) | 3.90 | 3.80 | 3.60 | 2.80 |
| Water Absorption (%) | ≤ 0,1% gas tight | ≤ 0,2% gas tight | ≤ 0,2% gas tight | ≤ 0,4% gas tight |
| Flexural Strength (MPa) | 250 | 200 | 150 | 120 |
| Thermal Expansion (20-1000°C) | 8.5 x 10 ⁻⁶ K ⁻¹ | 7.4 x 10 ⁻⁶ K ⁻¹ | 6.0 x 10 ⁻⁶ K ⁻¹ | 5.5 x 10 ⁻⁶ K ⁻¹ |
| Colour | Yellow/ivory | white/pink | white | grey |

Types available

| | Outer dia. | Length |
|--|------------|-------------|
| Thermocouple protection tubes with one end closed (mm) | 8 up to 24 | up to 1,600 |
| Tubes with both ends open (mm) | 4 up to 24 | up to 1,600 |
| Insulating capillary tubes with two or four bores (mm) | 4 up to 15 | up to 1,600 |
| Rods (mm) | up to 10 | up to 1,600 |

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HIGH TEMPERATURE TECHNOLOGY