

PHYSICAL DATASHEET NITRITE BONDED SiC

Material:	Nitrite bonded SiC without steel inner tube
Applications:	Non-ferrous metals such as aluminium, brass, copper and copper alloys
Max. Temperature:	up to 1500°C
Connection:	with flange, groove or plane at the open end
Types:	CERN-(+length in centimetres) for thermocouple protection tubes CERN-HT-(+length in centimetres)-COE for immersion heater tubes CERN-HT(+length in centimetres)-OBE for radiant heater tubes open both ends
Applications:	thermocouple protection tubes, heater tubes metal-transport-tubes and many more

THERMAL, MECHANICAL AND PHYSICAL PROPERTIES:

Properties	Unit	Value
Silicon carbide content	78 – 81	%
Si ₃ N ₄	19 – 22	%
Maximum temperature	1500	° C
Open porosity	18 – 22	Vol.-%
Raw density	2,58	kg/dm ³
Compressive strength (at 20° C)	85 – 100	N/mm ²
Bending strength (at 1400° C)	20 – 30	N/mm ²
Fire resistance	>38	SK
Thermal conductivity (at 1100° C)	8	W/mK
Thermal extension coefficient (20 - 1100° C)	4,5	K ⁻¹ x 10 ⁻⁶
Average specific heat (20 – 1100° C)	1050	J/kgK
Temperature exchange resistance		excellent

The given values are only valid for the tested samples and therefore only to be used as indication values.