Technical datasheet — INCOTHERM alloy TD

A high temperature corrosion resistant alloy specifically developed for use as thermocouple sheathing tube which does not contain elements which may cause a reduction in thermocouple performance over time.

Available products

Product form	Size range from	Size range to
Tube/pipe	12.0 mm outside diameter	25.4 mm outside diameter

Chemical composition (%)

Ni	Cr	Mo	Si	C	Other
Balance	22	3	1.4	0.01 max	Minor additions of rare earth elements

Major specifications

ASTM	UNS N
AMS	DIN

Physical properties

Density	8.17 g/cm^3
Melting range	1380-1400°C

Mechanical properties – typical room temperature properties

Yield strength	400 MPa
Tensile strength	790 MPa
Elongation	50 %

Key attributes

INCOTHERM alloy TD (also known as Pyrosil and Nicrobell) was developed specifically for thermocouple sheathing application. Elements such as manganese and aluminium which can over time diffuse through the insulator and contaminate the thermocouple wire are carefully controlled to very low levels. As a result the thermocouple does not experience any degradation in properties and gives excellent long term performance. The protective oxide layer is tightly adherent and resistant to spalling giving INCOTHERM alloy TD excellent static and cyclic oxidation resistance at service temperatures up to 1250°C.

Material is suitable for redrawing and internal surfaces have a very high standard of cleanliness to ensure ease of onward process and no contamination.

Applications

Thermocouple sheathing tubes in industrial processes such as heat treatment, chemical processing, furnaces, steel works, flue gases, power generation, ceramics production.

Do you require further information or a quotation?
Please contact us…
info@bibusmetals.com
www.bibusmetals.com