

Technical datasheet

Ti Grade 1 / W-Nr. 3.7025

Commercially pure, unalloyed titanium offering optimum ductility and cold formability.

Available products

Product form Sheet/plate	Size range from 0.4 mm thickness	Size range to 30.0 mm thickness
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Chemical composition (%)

Ti Balance	Fe 0.20 max	C 0.08 max	O 0.18 max	N 0.03 max	H 0.015 max
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Major specifications

ASTM B265, F67 ISO 5832-2	UNS R50250
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Physical properties

Density	4.51 g/cm ³	Beta transus temperature	888 ± 4 °C
Melting point	1670°C		

Mechanical properties – per ASTM B265

Yield strength	138-310 MPa
Tensile strength	240 MPa
Elongation	24 % min

Key attributes

Commercially pure titanium Grade 1 has high impact toughness, moderate strength and optimum ductility and cold formability. It has the highest cold formability of the available titanium grades and is suitable for deep drawing. It has excellent general and sea water corrosion resistance and offers high corrosion resistance in oxidizing, neutral and mildly reducing media including chlorides. The low density of titanium (approximately half that of nickel-based alloys), high strength to weight ratio and corrosion resistance make it the ideal material for many corrosive chemical environments.

Applications

Chemical and marine engineering
Plate heat exchangers
Reaction vessels
Pharmaceutical
Medical and dental applications