S+D METALS

A BIBUS GROUP COMPANY

# Technical datasheet

# Titanium Grade 2

## Major specifications

| | | | | | | |
|---|---|---|---|---|---|---|
| ASTM B348 | ASTM F67 | ASTM B265 | ASME SB 265 | ISO 5832-2 | 3.7035 | UNS R50400 |

## Available product forms

Coils and Sheets in ASTM B265 + ASTM F67 + ISO 5832 + ASME SB 265
Plates in ASTM B265 + ASME SB 265
Round bars in ASTM B348 + ASTM F67 + ISO 5832
The current stock range can be found on www.sd-metals.com.
Further dimensions available upon request.

## Key features

Commercially pure unalloyed titanium, which offers an excellent balance between strength and ductility. It has good impact strength and is readily weldable. It has good corrosion resistance in highly oxidizing environments, alkaline media, aqueous salt solutions, slightly reducing environments, nitric acid- and wet chlorine gas. It also has excellent resistance to seawater and salt solutions. Titanium's low density, high strength-to-weight ratio and resistance to corrosion make it an ideal material for a wide range of applications. Because it is castable, it is often used for cast valves and fittings.

## Applications

- corrosion resistance in chemical and maritime industries
- plate heat exchangers
- reaction vessels
- evaporators
- condensers
- electroplating equipment
- desalinization plants
- seawater heaters
- medical equipment
- structural engineering

## Chemical properties

**Composition - limits in % (ASTM B265 + ASTM B348)**

| **Fe** | **O** | **C** | **N** | **H** | **Ti** |
|---|---|---|---|---|---|
| max. 0,30 | max. 0,25 | max. 0,08 | max. 0,03 | max. 0,015 | Rest |

## Physical and thermal properties

| | |
|---|---|
| Density | 4,51 g/cm$^3$ |
| Melting temperature | 1670°C |
| Beta transus temperature | 920 ± 4°C |
| Thermal conductivity at 20°C | 16 W/ m°C |

## Typical mechanical properties (room temperature )

| | **ASTM B265** | **ASTM B348** |
|---|---|---|
| Yield strength | min. 275, max. 450 MPa | min. 275 MPa |
| Tensile strength | min. 345 MPa | min. 345 MPa |
| Elongation | min. 20% | min. 20% |

Olaf Hölscher | +49 211 23 09 99-22 | o.hoelscher@sd-metals.com
Andreas Conraths | +49 211 23 09 99-16 | a.conraths@sd-metals.com
Kevin Verhoeven | +49 211 23 09 99-13 | k.verhoeven@sd-metals.com
S+D METALS GmbH | +49 4174 66 94 -0 | www.sd-metals.com