

Titanium

Typical Applications

Components/equipment for architecture, medical engineering, automotive, chemical plant, pharmaceutical, brewing, food, oil & gas, pulp & paper and marine industries.

Product Description

CP (Commercially Pure) Grade 3 is unalloyed titanium providing higher mechanical strength (typical yield strength 462 MPa) compared with CP Grades 1 and 2 and ASME code case allowable stresses combined with moderate ductility and excellent weldability. Grade 3 titanium has a density of 4.51 g/cc - less than 60% that of steel.

Corrosion Resistance

This material offers high corrosion resistance in oxidising, neutral and mildly reducing media, including chlorides.

Material Specifications

- UNS R50550
- ASTM B348 Grade 3
- W. Nr. 3.7055
- AMS 4900
- AIR 9182 T-50
- ASTM 265 Grade 3

Fabrication

- Weldability – excellent
- Specified bend radius for <0.070 in. x thickness – 2.0
- Specified bend radius for >0.070 in. x thickness – 2.5
- Welded bend radius x thickness – 3.0 (min.)

Availability

Bar, wire, strip, sheet, plate, seamless and welded pipe.

Chemical Composition (weight %)

Weight (%)	C	Fe	N	O	H (sheet)	H (bar)	Ti
Min							
Max	0.1	0.3	0.05	0.35	0.015	0.0125	Balance

Mechanical Properties

	Minimum	Typical
UTS, MPa	448	593
0.2% PS, MPa	379	462
Elongation on 2 in., %	18	25
Reduction of area, %	35	-
Elastic modulus, GPa	-	103
Charpy, V notch impact, J	20	-
Hardness, HV	-	200

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast **02895 908 897**
 Smiths Biggleswade **01767 604 704**
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Quality & Testing:



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