

### 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 1 is unalloyed titanium providing optimum ductility and cold formability combined with useful mechanical strength (typical yield strength 221 MPa). Grade 1 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 R50250
- ASTM B348 Grade 1
- BS TA1
- AMS 4940
- AIR 9182 T-35
- ASTM 265 Grade 1

#### Fabrication

- Weldability – excellent
- Specified bend radius for <0.070 in. x thickness – 1.5
- Specified bend radius for >0.070 in. x thickness – 2.0
- Welded bend radius x thickness – 2.0 (min.)

#### Availability

Bar, wire, strip, sheet, plate, foil, extrusions, forgings, seamless pipe/tube.

#### Chemical Composition (weight %)

Weight (%)	C	Fe	N	O	H(sheet)	H(bar)	Ti
Min							
Max	0.1	0.2	0.03	0.18	0.015	0.0125	Balance

#### Mechanical Properties

	Minimum	Typical
UTS, MPa	240	345
0.2% PS, MPa	138	221
Elongation on 2 in., %	24	37
Reduction of area, %	30	-
Elastic modulus, GPa	-	103
Hardness, HV	-	120

#### 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**  
 Smiths Birmingham **0121 728 4940**  
 Smiths Bristol **0117 971 2800**  
 Smiths Chelmsford **01245 466 664**  
 Smiths Gateshead **0191 469 5428**  
 Smiths Horsham **01403 261 981**

Smiths Leeds **0113 307 5167**  
 Smiths Manchester **0161 794 8650**  
 Smiths Norwich **01603 789 878**  
 Smiths Nottingham **0115 925 4801**  
 Smiths Redruth **01209 315 512**  
 Smiths Verwood **01202 824 347**  
 Main Office **0845 527 3331**

#### Quality & Testing:



[www.smithmetal.com](http://www.smithmetal.com) [info@smithmetal.com](mailto:info@smithmetal.com)