CP Grade 1

Technical Datasheet

精欣达 JING XIN DA

Titanium Service. Quality. Value.

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.