

CP Grade 4

Smiths Advanced Metals

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Grade 4 Titanium Sheet

The strongest of all commercially pure titanium grades

With excellent resistance to corrosion and corrosion fatigue, CP Grade 4 offers high mechanical strength with a typical yield strength of 559 MPa.

While Grade 4 offers lower toughness despite its higher mechanical strength, the alloy offers good weldability and formability. Hot forming will also improve the overall ductility of the alloy. From a forming perspective, CP Grade 4 is similar to 300 series stainless steel grades.

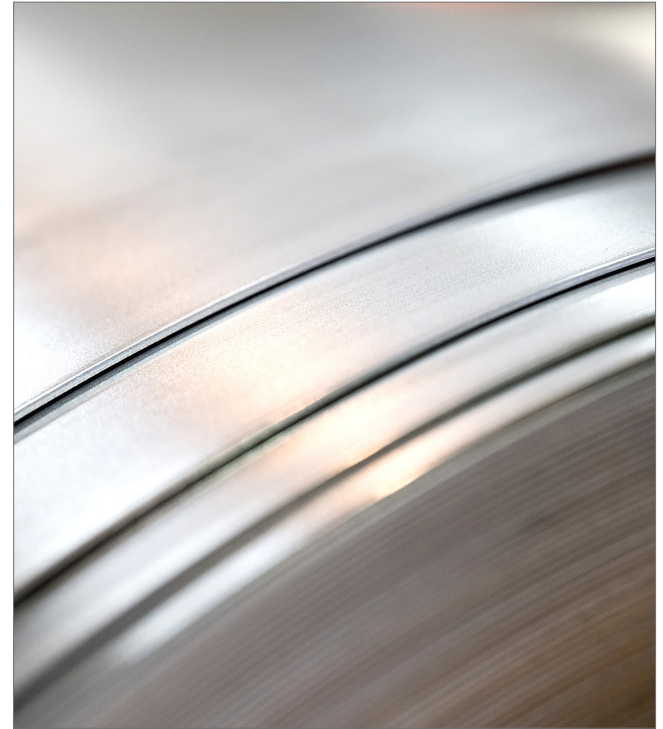
Smiths Advanced Metals stocks CP Grade 4 titanium alloy sheets in the annealed condition and in a broad range of incremental sizes.

Grades / Specifications

- AMS4901
- ASTM B265
- BS TA6

Benefits

- Excellent resistance to corrosion
- Good weldability
- Good formability
- High mechanical strength



Key Applications

- Marine components
- Oil and Gas applications
- Aerospace parts
- Pulp & paper production

Chemical Composition (weight %)

	Ti	C	Fe	N	O	H	Others (each)	Others (total)	
min.	Bal								
max.	Bal	0.08	0.50	0.05	0.40	0.015	0.10	0.30	

* As per AMS 4901

*Mechanical Properties (minimum unless indicated)

	Minimum
UTS, MPa	552
0.2% PS, MPa	483 - 655
Elongation on 2 in., %	15

* Properties as per AMS 4901

Machinability

Titanium has an unfair reputation as being difficult to machine. In reality, this is not the case.

As long as the operator adopts good working practices, machining titanium is not the issue purported. As the alloy has low thermal conductivity, high coolant flow is a must, and the material should be cut at low speeds and at reasonably high feed rates. Operators should also use tungsten carbide tooling or cobalt high-speed tools.

www.smithsadvanced.com

info@smithsadvanced.com



Stratton Business Park,
London Road, Biggleswade,
Bedfordshire SG18 8QB
Tel: +44 (0) 1767 604710

