

### Wipro 3D – TiCP Grade 2

**Titanium Grade 2** (Commercially Pure Titanium) is widely used due to its excellent corrosion resistance, moderate strength, and good formability.

#### Characteristics of the Alloy:

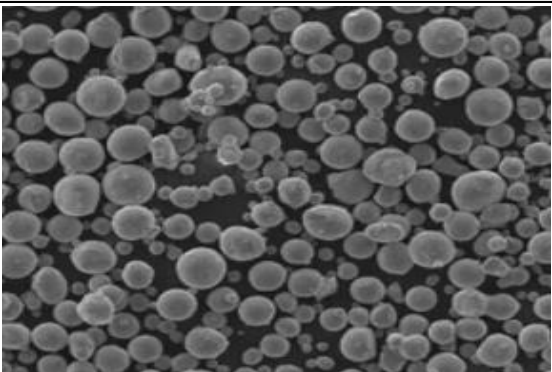
- **Formability:** Very good; suitable for cold and hot working
- **Weldability:** Excellent; commonly welded using TIG or plasma arc methods
- **Machinability:** Fair; requires sharp tools and low cutting speeds

#### Applications

- Chemical processing equipment
- Heat exchangers and condensers
- Marine and aerospace components
- Medical devices (non-load bearing)
- Desalination plants

#### Chemical Composition

Chemical composition of raw material and built parts is compliant to table given below.

Chemical Composition (weight%)		Powder morphology in SEM
Element	Limitations	
N	0.03 max	
C	0.08 max	
H	0.015 max	
Fe	0.3 max	
O	0.25 max	
Ti	Balance	

### Mechanical Properties

Mechanical properties of built parts confirm to below.

Properties	HT condition
Tensile Strength (MPa)	>550
Yield Strength (MPa)	>400
Elongation (%)	>20
Reduction in Area(%)	>45

There are various heat treatment methods for improving strength and/or elongation, hence if the user provides exact requirements, it can be discussed to achieve these properties.

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