

# Metal Bars

## Features

### Corrosion Resistance

including in highly oxidizing, neutral, and mildly reducing environments, such as seawater, various chemical media, and chloride solutions. This is due to the rapid formation of a stable, protective oxide film when exposed to oxygen.

**Strength-to-Weight Ratio** is excellent, weighing about half as much as stainless steel of the same dimensions.

**Weldability** is very good and is considered ductile, allowing for easy cold and hot working and machining

### Mechanical Properties

provides a moderate level of strength, falling between Grade 1 (softer) and Grade 3 (stronger) of commercially pure titanium grades.

### Biocompatibility

is excellent, making it suitable for medical field applications like artificial skeletal structures and dental implants.

All commercially pure titanium grades are **non-magnetic**.

## RS PRO Titanium Grade 2 Round Bar,

**L: 1000mm X D: 35mm**

RS Stock No: 0734246



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

*RS Pro Titanium Grade 2 round bar is a highly versatile, commercially pure (CP) titanium product, often referred to as the "workhorse" of the industrial titanium grades due to its optimal balance of strength, formability, and corrosion resistance. It is a non-magnetic material that offers superior performance in a variety of demanding environments.*

### Features and Benefits

- **Composition:** A commercially pure titanium that offers an excellent balance of moderate strength and reasonable ductility
- **Corrosion Resistance:** Highly corrosion-resistant in highly oxidizing and mildly reducing environments, including chlorides
- **Fabrication:** Possesses very good weldability, as the single-phase material's microstructure is not greatly affected by thermal treatments or welding temperatures
- **Reliability in Harsh Environments:** The strong corrosion resistance makes it suitable for demanding applications in the chemical and offshore industries, such as heat exchangers, hypochlorite systems, and risers (pp. 1-2).
- **Structural Integrity:** The balance of strength and ductility makes it useful in applications requiring a certain strength level and ease of formability, such as aircraft construction components (fittings, flanges, fasteners) (pp. 1-2).
- **Ease of Use:** Excellent weldability ensures that correctly welded joints maintain or exceed the properties of the parent metal and show good ductility
- **Weight Efficiency:** Its low density provides a good strength-to-weight ratio, beneficial for aircraft construction and other weight-sensitive applications

### Applications

- Aerospace components
- Chemical processing equipment
- Marine applications (rigging, piping)
- Medical implants and devices
- Power Generation

## General Specifications

<b>Material</b>	Titanium
<b>Form</b>	Bar
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Aerospace components</li> <li>• Chemical processing equipment</li> <li>• Marine applications (rigging, piping)</li> <li>• Medical implants and devices</li> <li>• General industrial and fabrication projects</li> </ul>
<b>Grade</b>	Grade 2
<b>Density</b>	4.51 g/cm <sup>3</sup>

## Mechanical Properties

<b>Length</b>	1000MM
<b>Diameter</b>	35MM
<b>Tensile Strength</b>	344 – 485 MPa
<b>Yield Strength (0.2% Offset)</b>	275 MPa (min)
<b>Elongation at Break</b>	20% - 28%
<b>Melting Point</b>	1660°C to 1670°C
<b>Modulus of Elasticity</b>	103 to 105 GPa
<b>Magnetic Permeability</b>	Non-magnetic

## Similar Products

<b>RS Code</b>	<b>Form</b>	<b>Dimensions</b>
0734239	Bar	Titanium Grade 2 Bar 1000MMx12.7MM
0734240	Bar	Titanium Grade 2 Bar 1000MMx16MM
0734241	Bar	Titanium Grade 2 Bar 1000MMx20MM
0734243	Bar	Titanium Grade 2 Bar 1000MMx22.22MM
0734244	Bar	Titanium Grade 2 Bar 1000MMx25MM
0734245	Bar	Titanium Grade 2 Bar 1000MMx30MM
0734096	Bar	Titanium Grade 2 Bar 1000MMx40MM
0734097	Bar	Titanium Grade 2 Bar 1000MMx45MM
0734098	Bar	Titanium Grade 2 Bar 1000MMx50MM
0734099	Bar	Titanium Grade 2 Bar 1000MMx55MM
0734100	Bar	Titanium Grade 2 Bar 1000MMx60MM
0734101	Bar	Titanium Grade 2 Bar 1000MMx65MM
0734102	Bar	Titanium Grade 2 Bar 1000MMx70MM
0734103	Bar	Titanium Grade 2 Bar 1000MMx75MM
0734104	Bar	Titanium Grade 2 Bar 1000MMx76.2MM