



What are 1.4571 Stainless Steels?

1.4571 is the titanium version of 316 Stainless Steel. Stainless steel grade 1.4571 contains a minor percentage of titanium in its alloy composition. Titanium content is usually around 0.5%. The titanium atoms strengthen the structure of type 316 at temperatures above eight hundred degree centigrades. This helps to avoid carbide precipitation at the grain boundaries and safeguards the material from the attack of corrosion. 1.4571 is also known as 316Ti. It can be held at elevated temperatures for an extended period. Most of the mechanical properties of 316 type remain same in 1.4571 grade.

Professionals know that 1.4571 has been used in the chemical processing industry for long even in the 1920s. 316L is appropriate for welding purposes of higher gauges whereas 1.4571 is appropriate for extensive application in the high-temperature environment. If 1.4571 intends to be welded, filler materials such as 1.4430, 1.4576 are recommended to be used.

Is 1.4571 Stainless Steel Magnetic?

1.4571 is austenite stainless steel. It is therefore nonmagnetic in its properties. Thus we can say that 1.4571 grade is a non-magnetic material.

What is EN 10088-3?

EN 10088-3 is a technical standard on stainless steel. It is titled "Technical delivery conditions for semi-finished products, bars, rods, wire, sections, and bright products of corrosion resisting steels for general purposes". It enlightens the technical delivery requirements for semi-finished products, sections, bright products, hot or cold formed wire, bars, rods of special and standard grades of corrosion resistant stainless steel for general purposes. 1.4571 grade is also identified in the EN 10088-3 standard.

Dimensional Characteristics

There are no standard dimensional ranges since 1.4571 is available in different forms. It is



1.4571 Stainless Steel - Titanium Austenite Material


up to the manufacturer's what are their limitations for dimensions of different forms. Buyers are advised to communicate the dimensional requirements with manufacturers. We are not stating any specific data from the market on dimensions for 1.4571 grade.

Available Forms in Market

Following are the available forms of 1.4571 Stainless Steels:

- Plates
- Strips
- Forged Items
- Wire
- Tubing & pipes
- Bars
- L shape
- Rods
- Sheet
- Fittings
- Flanges

The Chemical Composition



Titanium
Atomic Number 22
Symbol "Ti"

Titanium Element Infographic

Chemical alloying compositions are explicated below

Maximum percentage of Carbon is 0.08

Maximum percentage of Manganese is 2.0

Maximum percentage of Phosphorus is 0.05

Maximum percentage of Sulphur is 0.03

Percentage of Molybdenum is indicated between 2.0 to 2.5

Maximum percentage of Silicon is 1.0

Maximum percentage of Nickel is 13.5 and minimum is 10.5

Maximum percentage of Titanium (Ti) is 0.70 and minimum is 0.40

Maximum percentage of Chromium is 18.5 whereas the minimum percentage of Chromium is 16.5

Rest is the base metal i.e. iron.

1.4571 stainless steel have outstanding qualities even better than AISI 316 grade when it comes to withstanding high temperature for an extended period of time. This Type has other mechanical properties similar to 316 stainless steel except that it has titanium that makes it more stable for high temperature. It is also known as 316Ti material.



Mechanical Properties

Tensile strength is in the range of 500-700 Mpa as in some sources.

Yield strength is 200 Mpa (in some technical sources)

Hardness in HB (in technical sources) is around 215.

Minimum Elongation is 40% in 2" in the standard.

Density is 8.0 grams per cubic centimeters

The melting point is around fourteen hundred degrees Celsius.

This type can withstand temperature over 800 centigrades for the extended time period.

Equivalent Materials

The equivalent materials for 1.4571 Stainless Steels specified in other recognized standards are as follows:

In JIS standard, the equivalent material is SUS 316Ti.

In American standard, the equivalent material is 316Ti type steel.

In UNS standard, the equivalent material is S31625 type steel.

In UK standard, it is known as 320S31

Applications

Variety of industrial and household applications consume this material, some of the applications are as follows:

Chemical and petrochemical equipment

Food processing equipment

Laboratory equipment

Mining accessories

Springs

Bolts and Nuts

Coastal paneling

Heat Exchangers

Medical devices



Material Trading

Purchase This Material

Do you want to buy 316Ti stainless steel?

We can help you with buying 1.4571 stainless steel. You can send your inquiry by using our GDPR Compliant Order Inquiry Form.

Sell 316Ti Material

Do you want to become our premium supplier of 1.4571 stainless steel?

We can help you find customers looking for 1.4571 stainless steel, you can provide us your quotations for 316 stainless steel by using our GDPR compliant Online Quotation Form.

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Note: Mechanical and chemical properties given in values are indicative and for information purpose only. Some of the given information can be outdated. There are also minor possibilities for inaccuracies in the text due to human error. For inaccuracies & outdated text you can Complaint Us.