Xometry

Manufacturing On Demand

Data Sheet: Stainless Steel 1.4571

(X6CrNiMoTi17-12-2)

Alternative Designations

Standard	AFNOR	ANSI/AA	UNS	JIS	SIS	UNE
Designation	Z6NDT17.12	316Ti	S31675	SUS316TI	2350	F.3535

Details

This stainless steel contains a small amount of titanium (about 0.5%). The titanium gives the steel a stable structure at temperatures above 800°C. It has excellent corrosion resistance. It has good machinability but cannot be hardened by heat treatment. It is available as sheets, tubes, pipes, plates or bars. It is good for marine environments.

Key Features

Excellent corrosion resistance • Good machinability • Low hardenability • Excellent durability

Chemical Composition

Element	C	Si	Mn	P	S	Cr	Mo	Ni	Ti
Percentage	0.08	1	2	0.045	0.015	16.5 – 18.5	2 – 2.5	10.5 – 13.5	5 × C

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	**200**	**500 - 700**	**40**	**215**

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Physical Properties

Property	Value
Density [g/cm³]	**8**
Module of elasticity [GPa]	**200**
Electrical conductivity [m/Ω · mm²]	**1.33**
Coefficient of thermal expansion [K-1 · 10-6]	**16.5**
Thermal conductivity [W/m · K]	**15**
Specific heat capacity [J/kg · K]	**500**

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.