Data Sheet

Stainless Steel 316Ti / 1.4571 / X6CrNiMoTi17-12-2

Alternative Designations

X6CrNiMoTi17-12-2 (ISO) | 316Ti (AISI/SAE) | S31635 (UNS) | Z6NDT17.12 (AFNOR) | 320S17 (BS) | F.3535 (UNE) | 2350 (SIS) | X6CrNiMoTi1712 (UNI) | SUS316TI (JIS)

Key Features

Excellent corrosion resistance • Low hardenability • Excellent durability • High strength

Description

Stainless steel 1.4571 is austenitic stainless steel that contains chromium and nickel. The addition of these elements gives the steel good corrosion resistance and high mechanical strength. This material contains a small amount of titanium (about 0.5 – 0.75%). 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.

Mechanical Properties

Yield strength	235 MPa
Tensile strength	500 – 700 MPa
Elongation at break	30 – 40%
Hardness	215
Module of elasticity	200 GPa

Physical Properties

Density	8 g/cm³
Electrical conductivity	1.33 m/Ω · mm²
Coefficient of thermal expansion	16.5 K-1 · 10-6
Thermal conductivity	15 W/m · K
Specific heat capacity	500 J/kg · K

Chemical Composition

Al	-	N	-
Bi	-	Nb	-
C	0.08%	Ni	10.5 – 13.5%
Cd	-	O	-
Co	-	P	0.045%
Cr	16.5 – 18.5%	Pb	-
Cu	-	S	0.015%
Fe	-	Si	1%
H	-	Sn	-
Mg	-	Ti	5×C – 0.70%
Mn	2%	V	-
Mo	2 – 2.5%	Zn	-

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.