Data Sheet

Stainless Steel 304 / 1.4301 / X5CrNi18.10

Alternative Designations

X5CrNi18.10 (ISO) | 304 (AISI/SAE) | S30400 (UNS) | Z6CN18.09 (AFNOR) | 304S15 (BS) | F.3551 (UNE) | 2332 (SIS) | X5CrNi1810 (UNI) | SUS304 (JIS)

Key Features

Excellent corrosion resistance • Low thermal conductivity • Good machinability

Description

Stainless steel V2A is an austenitic chromium-nickel stainless steel. It is also known as 18/8 stainless steel. This is chromium-nickel austenitic stainless steel. The chromium element gives it excellent corrosion resistance. It has a tensile strength of 500 – 700 MPa. It has good machinability but low thermal conductivity. It is used in kitchen equipment such as pans, tubes, sinks and many more. It is easily formable. Due to its excellent resistance to corrosion, it is widely used in the food and beverage industry, as well as in many other industries.

Mechanical Properties

Yield strength	225 MPa
Tensile strength	500 – 700 MPa
Elongation at break	35 – 45%
Hardness	215
Module of elasticity	200 GPa

Physical Properties

Density	7.9 g/cm³
Electrical conductivity	1.4 m/Ω · mm²
Coefficient of thermal expansion	16 K-1 · 10-6
Thermal conductivity	15 W/m · K
Specific heat capacity	500 J/kg · K

Chemical Composition

Al	-	N	0.1%
Bi	-	Nb	-
C	0.07%	Ni	8 – 10.5%
Cd	-	O	-
Co	-	P	0.045%
Cr	17 – 19.5%	Pb	-
Cu	-	S	0.015%
Fe	-	Si	1%
H	-	Sn	-
Mg	-	Ti	-
Mn	2%	V	-
Mo	-	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.