

Data Sheet: Steel 1.4301

(X5CrNi18.10)

Alternative Designations

Standard	EN	ANSI/AA	UNS	JIS	SIS	UNE
Designation	EN 1.4301	304	S30400	SUS304	2332	F.3551

Details

This is chromium-nickel austenitic stainless steel. The chromium element gives it excellent corrosion resistance. It has a tensile strength of 590MPa. 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.

Key Features

Excellent corrosion resistance • Low thermal conductivity • Good machinability

Chemical Composition

Element	C	Si	Mn	P	S	Cr	Mo	Ni	
Percentage	0.07	1	2.0	0.045	0.015	17 – 19.5		8 – 10.5	

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	200	500 - 700	45	160 - 200

Physical Properties

Property	Value
Density [g/cm ³]	7.9
Module of elasticity [GPa]	200
Electrical conductivity [m/Ω · mm ²]	1.4
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	16
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](https://www.materialdatacenter.com) for further information on this material.