

Steel 304L / 1.4307 / X2CrNi18-9

Alternative Designations

304L (AISI/ASTM/UNS)

Key Features

Excellent ductility • Non-magnetic • Tough • Strong • Corrosion resistant

Description

Steel 1.4307 / X2CrNi18-9 is an austenitic chromium-nickel stainless steel with molybdenum added to increase corrosion resistance and toughness. The steel is non-magnetic and has excellent ductility, making it suitable for a wide range of applications such as pressings, drawn components, and welded fabrications. This material is also commonly used in the food and chemical industries, as well as in the construction and offshore sectors.

Mechanical Properties

Yield strength	175 – 210 MPa
Tensile strength	500 – 700 MPa
Elongation at break	45%
Hardness	215
Module of elasticity	193 GPa

Physical Properties

Density	7.9 g/cm ³
Electrical conductivity	1.36 m/Ω · mm ²
Coefficient of thermal expansion	17.2 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	0.03%	Ni	8 – 10.5%
Cd	-	O	-
Co	-	P	0.045%
Cr	17.5 – 19.5%	Pb	-
Cu	-	S	0.03%
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.