

## stainless steel data sheet

Stainless steel types 1.4301 and 1.4307 are also known as grades 304 and 304L respectively.

Type 304 is the most versatile and widely used stainless steel. It is still sometimes referred to by its old name 18/8

which is derived from the nominal composition of type 304 being 18% chromium and 8% nickel.

Type 304 stainless steel is an austenitic grade that can be severely deep drawn.

This property has resulted in 304 being the dominant grade used in applications like sinks and saucepans.

Type 304L is the low carbon version of 304. It is used in heavy gauge components for improved weldability.

Some products such as plate and pipe may be available as "dual certified" material that meets the criteria for both 304 and 304L. 304H, a high carbon content variant, is also available for use at high temperatures.

Property data given in this document is typical for flat rolled products covered by ASTM A240/A240M. ASTM,

EN or other standards may cover products sold. It is reasonable to expect specifications in these standards to be similar but not necessarily identical to those given in this datasheet.

#### Alloy Designations

Stainless Steel Grade 1.4301/304 also corresponds to the following designations

304S15

304S16

304S31

EN58E

#### Supplied Forms

- Sheet
- Strip
- Tube
- Bar
- Fittings & Flanges

#### CHEMICAL ELEMENT                      0% PRESENT

Carbon (C)	0.0 - 0.07
Chromium (Cr)	17.50 - 19.50
Manganese (Mn)	0.0 - 2.00
Silicon (Si)	0.0 - 1.00
Phosphorous (P)	0.0 - 0.05
Sulphur (S)	0.0 - 0.02
Nickel (Ni)	8.00 - 10.50
Iron (Fe)	Balance

#### PHYSICAL PROPERTY                      VALUE

Density	8.00 Kg/m <sup>3</sup>
Melting Point	1450 °C
Thermal Expansion	17.2 x10 <sup>-6</sup> /K
Modulus of Elasticity	193 GPa
Thermal Conductivity	16.2 W/m.K
Electrical Resistivity	0.072 x10 <sup>-6</sup> Ω .m

#### MECHANICAL PROPENTY

Proof Stress	210 Min MPa
Tensile Strength	520 to 720 MPa
Elongation	45 Min %
Compressive Strength	210 MPa

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