

Chromium - Nickel Stainless Steel

Grade 304 (1.4301)

Product Description/ Specification

Stainless Steel type 304 also known as 1.4301 is a high chromium and low carbon stainless steel. Lower carbon minimises chromium carbide precipitation due to welding and its susceptibility to intergranular corrosion. This type of stainless steel is preferred for application in corrosive environment.

An even lower carbon content version of this material is also available, as 304L (1.4307) which completely eliminates carbide precipitation due to welding.

The material is produced to the following specifications:-

Austenitic Stainless Steel ASTM A240 / ASTM A167 / EN10088-4

Chemical Composition:

Chemical Name	Manganese	Phosphorous	Sulphur	Silicon	Chromium	Nickel	Carbon	Nitrogen
Weight %	2.00 max.	0.045 max.	0.030 max.	0.75 max.	18.0 – 20.0	8.0 – 12.0	0.08 max	0.10 max.

Mechanical Properties:

Tensile Strength, min		Yield Strength, min		Elongation, min	Hardness, max
ksi	MPa	ksi	MPa	in 2 in. or 50 mm %	Rockwell B
90	621	42	290	55	95

Physical Properties:

Density (g/cm ³)	Melting Point °C	Thermal Expansion / k	Thermal Conductivity W/m.K	Electrical Resistivity Ω.m
7.7 – 8.3	1399 – 1454	10.4 X 10 ⁻⁶	12.4	0.072 X 10 ⁻⁶

Safety:

There are no known health risks in handling stainless steel, although it is recommended that gloves should be worn in case of sharp edges. Good lifting practice techniques should always be followed when handling these products.

For more details on safety, please refer to material safety datasheet.



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ISO 9001: 2008

