

304 / 304L STAINLESS

AUSTENITIC STAINLESS STEEL

PRODUCT DESCRIPTION

Type 304 stainless steels have a lower carbon content which minimises chromium carbide precipitation due to welding and its susceptibility to intergranular corrosion. It is an austenitic alloy which contains 8% nickel and 18% chrome. 304 benefits from reasonable machinability whilst weldability and forming characteristics are excellent. Complex shapes can be formed due to the alloys low yield strength and high elongation. The material also benefits from very good drawability.

KEY FEATURES

- 18% chrome and 8% nickel content
- Can be welded by common techniques
- Reasonable machinability
- Good drawability

APPLICATIONS

- Springs, nuts, bolts & screws
- Chemical and pharmaceutical equipment
- Sinks and splash backs

CHEMICAL COMPOSITION (weight %)

	C	Cr	Mn	Si	P	S	Ni	Fe
Min		17.50		1.00	0.05	0.02	8.00	
Max	0.07	19.50	2.00	1.00	0.05	0.02	10.50	Bal

MECHANICAL PROPERTIES

Tensile strength	500 - 700	MPa
Proof Stress	210 min	MPa
Elongation A5	45 min	%

PHYSICAL PROPERTIES

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



AVAILABILITY

Round Bar, plate, sheet, wire and tube

ABOUT 304L

Type 304L is the low carbon version of 304, does not require post-weld annealing and so is extensively used in heavy gauge components (over about 6mm).