

Austenitic Stainless Steels

| Chemical Composition (%) | | | | | | | | | | | |
|--------------------------|----------------|----------------------------|---------|--------|--------|---------|---------------|-------------|-----------|-------------|-------------------|
| No | Grade | DIN | C | Si | Mn | P | S | Cr | Mo | Ni | Others |
| 1 | 301 | 1.4310 - X10CrNi18-8 | < 0.15 | < 2.00 | < 2.00 | < 0.045 | < 0.03 | 16 - 19 | 0 | 6 - 9.5 | N = 0.12 - 0.22 |
| 2 | 302 | NA | < 0.15 | < 1.00 | < 2.00 | < 0.045 | < 0.03 | 17 - 19 | 0 | 8 - 10 | N < 0.1 |
| 3 | 303 | 1.4305 - X8CrNiS18-9 | < 0.10 | < 1.00 | < 2.00 | < 0.045 | < 0.15 - 0.35 | 17 - 19 | 0 | 8 - 10 | Cu < 1; N < 0.11 |
| 4 | 304 | 1.4301 - X5rNi18-10 | < 0.07 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 17 - 19.5 | 0 | 8 - 10.5 | N < 0.11 |
| 5 | 304L | 1.4306 - X2CrNi19-11 | < 0.030 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 18 - 20 | 0 | 10 - 12 | N < 0.11 |
| 6 | 316 | 1.4401 - X5CrNiMo17-12-2 | < 0.07 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 16.5 - 18.5 | 2 - 2.5 | 10 - 13 | N < 0.11 |
| 7 | 316L | 1.4404 - X2CrNiMo17-12-2 | < 0.03 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 16.5 - 18.5 | 2 - 2.5 | 10 - 13 | N < 0.11 |
| 8 | 316L | 1.4435 - X2CrNiMo18-14-3 | < 0.03 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 17 - 19 | 2.5 - 3 | 12.5 - 15 | N < 0.11 |
| 9 | 316L-Ultra | 1.4435 | < 0.03 | < 0.60 | < 2.00 | < 0.040 | < 0.015 | 17 - 18.5 | 2.5 - 3 | 13 - 15 | NA |
| 10 | 316L (Medical) | 1.4441 - X2CrNiMo18-15-3 | < 0.03 | < 1.00 | < 2.00 | < 0.025 | < 0.010 | 17 - 19 | 2.5 - 3.2 | 13 - 15.5 | N < 0.1; Cu < 0.1 |
| 11 | 316Ti | 1.4571 - X6CrNiMoTi17-12-2 | < 0.08 | < 1.00 | < 2.00 | < 0.045 | < 0.015 | 16.5 - 18.5 | 2 - 2.5 | 10.5 - 13.5 | 5x%C<Ti<0.7 |
| 12 | 316LS | NA | < 0.03 | < 1.00 | < 2.00 | < 0.045 | 0.12 - 0.18 | 16.5 - 18.5 | 2 - 2.5 | 11 - 14 | Cu 1 - 2 |
| 13 | 316LS-PXQ | 1.4427So | < 0.03 | < 1.00 | < 2.00 | < 0.045 | 0.10 - 0.13 | 16.5 - 18.5 | 2 - 2.8 | 12 - 14 | NA |
| 14 | 316L - PM | 1.4435 PM | < 0.03 | < 1.00 | < 2.00 | < 0.045 | 0.015 - 0.03 | 17 - 19 | 2.5 - 3 | 12.5 - 15 | N < 0.11 |
| 15 | 316L - Ugima | 1.4435 Ugima | < 0.03 | < 1.00 | < 2.00 | < 0.045 | < 0.03 | 17 - 18.5 | 2.5 - 3 | 12.5 - 15 | NA |
| 16 | 904L | 1.4539 - X1NiCrMoCu25-20-5 | < 0.02 | < 0.70 | < 2.00 | < 0.030 | < 0.010 | 19 - 21 | 04-May | 24 - 26 | Cu = 1.2 - 2.0 |

Materials Available

AISI 302

One of the simplest austenitic stainless steels. It contains slightly more chromium and Nickel than 301 type, which enhances the resistance to corrosion.

AISI 303

Austenitic stainless steel with improved machinability through the addition of 0.15 to 0.35% of Sulfur, this additive is dispersed as soft inclusions throughout the matrix, thus breaking chips and lubricating tools.

AISI 304

Austenitic Cr-Ni stainless steel. Better corrosion resistance than Type 302. High ductility, excellent drawing, forming and spinning properties. Essentially non magnetic, becomes slightly magnetic when cold worked. Low carbon means less carbide precipitation in the heat-affected zone during welding and a lower susceptibility to intergranular corrosion.

AISI 316L (DIN : 1.4435)

Austenitic stainless steel with excellent corrosion resistance. The low carbon content effectively reduces the susceptibility to intergranular corrosion. The present of molybdenum enhances the resistance to oxidizing acids as well as to pitting corrosion.

AISI 317L

317L is a molybdenum bearing austenitic chromium nickel steel similar to 316: except the alloy content in 317L is somewhat higher.

It has superior corrosion resistance in specific applications where it is desired to reduce contamination to a minimum. 317L was developed primarily to resist more effectively the attack of sulphurous acid compounds. However, its proven ability to combat corrosion has widened its use considerably and is now being used for many other industrial applications.

AISI 904L

This steel with high Nickel and Molybdenum contents presents improved corrosion resistance as compare to 316L. It is used in the chemical industry for pipes and tank in contact with corrosive fluids. Machining is more difficult than the conventional 316L. This steel complies to the standard EN 1811 and can be used for products in direct and prolonged contact with skin.

This steel can easily be cold rolled, drawn and stamped. However, suitable tooling is required because of its high work hardening rate. This steel is relatively difficult to machine.

UNS C75600 (DIN : CuNi18Zn20)

German silver (or nickel silver) with high toughness, good corrosion resistance and excellent cold formability. This alloy is mainly used in jewelry and for spectacle frames.

The alloy exhibits excellent cold formability and it can be mirror polished.