

302 stainless steel is an extremely tough, ductile grade that demonstrates superior corrosion resistance. Type 302 (AMS 5516) is a higher carbon version of type 304, and is ideal for uses such as stamping and forming of products like flat washers from sheet material. It is corrosion resistant in many environments and its higher level of corrosion resistance make it a great choice for the food and beverage industry. We offer 302 sheet and plate products (UNS S30200) in a variety of thicknesses for your specific applications.

302 Chemical Composition

C	Carbon - 0.15% maximum
Mn	Manganese - 2.00% maximum
P	Phosphorus - 0.045% maximum
S	Sulfur - 0.03% maximum
Si	Silicon - 0.75% maximum
Cr	Chromium - 17.000 - 19.000%
Ni	Nickel - 8.000 - 10.000%
Al	Aluminum - 0.1% maximum

Percent by weight, maximum unless a range is listed.

Other industry standards we comply with

- PWA-LCS
- GE Aircraft Engine (GT193)
- GE Aviation S-SPEC-35 AeDMS S-400
- RR SABRe Edition 2
- DFARS Compliant

Standard Inventory Specifications

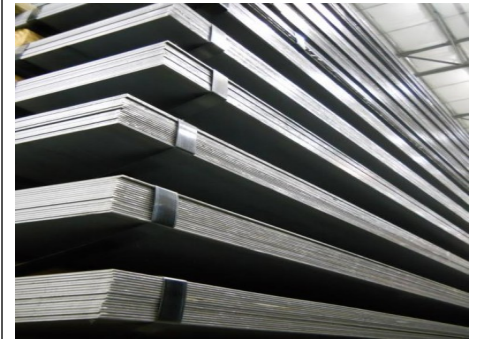
- UNS S30200
- AMS 5516
- ASTM A 666
- ASTM A 240
- ASME SA 240
- ASME SA 666

Forms Stocked

- Coil - 0.010" - 0.125" thick
- Sheet - 0.010" - 0.125" thick
- Rolled Strip - 0.0008" - 0.015"

Applications

- Food and beverage industry
- Pressure containing applications
- Sanitary or cryogenic applications



Call 1.888.282.3292

Or click here to view our product page and request a quote on 302 stainless

Features

- Excellent corrosion resistance
- Ease of fabrication
- Good strength and toughness at cryogenic temperatures
- Excellent formability

The technical data provided is for information only and not for design purposes. It is not warranted or guaranteed.

Resistance to Corrosion: Types 302 austenitic stainless steels provide useful resistance to corrosion on a wide range of moderately oxidizing to moderately reducing environments, such as found in the food processing industry, heat exchangers, piping, tanks, architectural applications and more.

Physical Properties

- Density: 0.29 lb/in³ (8.03 g/cm³)
- Modulus of Elasticity in Tension: 29 x 10⁶ psi (200 GPa)

Linear Coefficient of Thermal Expansion

Temperature Range		Mean Coefficient of thermal Expansion	
°C	°F	cm/cm°C	in/in/°F
20-100	68-212	16.6·10 ⁻⁶	9.2·10 ⁻⁶
20-870	68-1600	19.8·10 ⁻⁶	11·10 ⁻⁶

Thermal Conductivity

Temperature Range		Coefficients	
°C	°F	W/m·K	Btu/(hr/ft ² /hr/°F/ft)
100	212	16.3	9.4
500	932	21.4	12.4

Specific Heat

Temperature Range		J/kg°K	Btu/lb/°F
°C	°F		
0-100	32-212	500	0.12

Magnetic Permeability

H/m annealed
1.02 Max @ 200 H

Electrical resistivity (Annealed Condition)

Temperature Range		microhm-cm	microhm-in
°C	°F		
20	68	72	28.3
100	212	78	30.7
200	392	86	33.8
400	752	100	39.4
600	1112	111	43.7
800	1472	121	47.6
900	1652	126	49.6

Mechanical Properties

Grade	Tensile Strength, Min.		0.2% Yield Strength, Min.		Elong. In 2" (50mm) %, Min.	Hardness, Max.	
	psi	MPa	psi	MPa		Brinell	RB
302	30000	205	75000	515	40	201	92