

# 301 Stainless

## Technical Datasheet



Service. Quality. Value.

### Austenitic Stainless Steel Alloy

#### Typical Applications

- Automotive wheel covers
- Aircraft structural parts
- Railcar structural components
- Wiper blade clips
- Diaphragms
- Trailer components

#### Product Description

Type 301 is an austenitic stainless steel alloy is a high strength austenitic steel which offers good corrosion resistance in mildly corrosive environments at ambient temperature. Type 301 is suitable for all forms of welding and displays good ductility when cold worked. The alloy can also be readily formed and drawn. Type 301L is the low carbon version of Type 301 and is suitable for applications which require good ductility. High strength combined with excellent corrosion resistance makes 301 stainless suitable for a wide range of applications in sectors such as aerospace, rail and automotive.

#### Key features

- High strength austenitic stainless steel
- Good ductility properties when cold worked
- Excellent corrosion resistance
- Can be easily welded.

#### Corrosion resistance

Resistance to atmospheric corrosion is excellent.

#### Availability

Sheet and strip in coil

#### Related material specifications

- ASTM A 666
- ASTM A 240

#### Weldability

Good by common welding techniques.

#### Chemical Composition (weight %)

|     | C    | Mn   | P     | S     | Si   | Cr    | Ni   | N    | Fe  |  |  |
|-----|------|------|-------|-------|------|-------|------|------|-----|--|--|
| min |      |      |       |       |      | 16.00 | 6.00 |      | Bal |  |  |
| max | 0.15 | 2.00 | 0.045 | 0.030 | 0.75 | 18.00 | 8.00 | 0.10 | Bal |  |  |

#### Mechanical Properties (at room temperature)

|                    | UTS<br>ksi (MPa) | 0.2% YS<br>ksi (MPa) | Elongation<br>% in 2" (50.8mm) | Hardness<br>Rockwell |
|--------------------|------------------|----------------------|--------------------------------|----------------------|
| Annealed (Typical) | 110 (758)        | 40 (276)             | 60                             | B85                  |
| 1/4 Hard           | 125 (862)*       | 75 (517)*            | 25*                            | C25                  |
| 1/2 Hard           | 150 (1034)*      | 110 (758)*           | 18*                            | C32                  |
| 3/4 Hard           | 175 (1207)*      | 135 (931)*           | 12*                            | C37                  |
| Full Hard          | 185 (1276)*      | 140 (965)*           | 9*                             | C41                  |

\* Minimum - standard practice is to produce to minimum tensile strength, minimum yield strength or minimum hardness, but not to combinations of these properties.

#### Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

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#### Quality & Testing:



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