

SPECIFICATIONS

Commercial 441

Stainless steel producers have an ongoing programme of development designed to produce new grades. These new grades are sometimes developed for specific end uses and sometimes to improve upon an existing grade.

Type 1.4509 spans both of these two areas since it was developed for a particular range of applications in certain industries where it can be used in place of type 1.4301 (304). On some aspects, its properties and performance in service are actually superior to 304 whilst on others it falls between 430 and 304. Notably however, it is also lower cost than 304.

Type 1.4509 can be referred to as a 'Super-Ferritic'

Features:

- ~ Good for Deep Drawing
- ~ Good Weldability
- ~ Good pitting corrosion resistance
- ~ Good brightness
- ~ Polishes well

Applications/Industries:

The main target sector is catering equipment to replace grade 304

Availability:

- ~ 1250mm & 1500mm wide
- ~ Thicknesses 0.5mm to 2.0mm
- ~ Finishes Bright Annealed or Polished

CHEMICAL COMPOSITION

EN 10088-2:2005
1.4509 Steel

| Element | % Present |
|--------------------------|---------------|
| Chromium (Cr) | 17.50 - 18.50 |
| Manganese (Mn) | 0.0 - 1.00 |
| Niobium (Columbium) (Nb) | 0.0 - 1.00 |
| Silicon (Si) | 0.0 - 1.00 |
| Titanium (Ti) | 0.10 - 0.60 |
| Phosphorous (P) | 0.0 - 0.04 |
| Carbon (C) | 0.0 - 0.03 |
| Sulphur (S) | 0.0 - 0.02 |
| Iron (Fe) | Balance |

ALLOY DESIGNATIONS

Stainless Steel Grade 1.4509 is similar to **but not a direct equivalent to:**

Type 441
UNS 43940 / S43932
Uginox F18TNb

SUPPLIED FORMS

- Sheet
- Plate
- Tube

GENERIC PHYSICAL PROPERTIES

| Property | Value |
|------------------------|-----------------------------|
| Density | 7.70 g/cm ³ |
| Melting Point | 1505 °C |
| Thermal Expansion | 11.0 x10 ⁻⁶ /K |
| Modulus of Elasticity | 220 GPa |
| Thermal Conductivity | 25.0 W/m.K |
| Electrical Resistivity | 0.60 x10 ⁻⁶ Ω .m |

MECHANICAL PROPERTIES

EN 10088-2:2005
Sheet & Plate
Up to 8mm Thick

| Property | Value |
|-------------------|-------------|
| Proof Stress | 230 Min MPa |
| Tensile Strength | 430-630 MPa |
| Elongation A50 mm | 18 Min % |

Properties listed above are for 1.4509 Sheet & Plate

CONTACT

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REVISION HISTORY

Datasheet Updated 13 March 2020

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