

Stainless Steel

1.4509 (441) Sheet and Plate



SPECIFICATIONS

Commercial	441
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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)	17.5 - 18.5
Manganese (Mn)	1 max
Niobium (Columbium) (Nb)	1 max
Silicon (Si)	1 max
Titanium (Ti)	0.1 - 0.6
Phosphorous (P)	0.04 max
Carbon (C)	0.03 max
Sulphur (S)	0.02 max
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

Address:	Please make contact directly with your local service centre, which can be found via the Locations page of our web site
Web:	www.aalco.co.uk

REVISION HISTORY

Datasheet Updated	13 March 2020
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