

SINOXX^{...} 4948

AUSTENITIC STAINLESS STEELS

SINOXX 4948 is one of the most widely used austenitic stainless-steel grades supplied to numerous industry sectors. Its mechanical properties, chemical composition, corrosion resistance and weldability provide the best all-around performance at a relatively low cost. The austenitic structure gives this grade excellent toughness. SINOXX 4948 has higher strength at elevated temperatures and is often used for structural applications at temperatures above approx. 500 °C and up to approx. 800 °C.

APPLICATIONS

- Pipelines
- Heat exchangers
- Pressure vessels
- Flanges and fittings
- Processing equipment
- General construction

SPECIFICATIONS

SIJ	AISI	UNS	EN	Standards
SINOXX 4948	304H	S30409	1.4948	ASTM A240/A240M, ASME SA240/SA240M, EN 10088-1, EN 10028-7

CHEMICAL COMPOSITION [wt. %]

	C	Mn	P	S	Si	Cr	Ni	N
SINOXX 4948	0.050	1.70	0.030	0.0010	0.35	18.0–18.3	8.0–8.3	0.1

PHYSICAL PROPERTIES

Density [g/cm ³]	Specific heat [J/kgK]*	Thermal conductivity [W/mK]*	Electrical resistivity [Ωmm ² /m]*	Magnetisation
7.9	500	15	0.73	No

* values at 20 °C in accordance with EN 10088-1

MECHANICAL PROPERTIES

0.2 % Yield strength min. [MPa]	Tensile strength [MPa]	Elongation min. [%]	Hardness max. [HB]	Impact Charpy V, 20 °C min. [J]
205	515–710	45	201	100

CORROSION RESISTANCE

SINOXX 4948 is an acid-resistant austenitic stainless steel that can be classified as heat-resistant and creep-resistant. It can be used at temperatures up to 550 °C. SINOXX 4948 is resistant to the same acids, alkalis, salts, and gases as ordinary stainless steel SINOXX 4301 and SINOXX 4307.

Grade	Tested per the following corrosion standards
SINOXX 4948	ASTM A262 Practice A, ASTM A262 Practice E, EN ISO 3651-2 Method A

GRAIN SIZE

The average grain size of SINOXX 4948 is no. 7 or coarser, in accordance with ASTM E112.

HOT FORMING

The hot forming temperature ranges between 850 °C and 1200 °C (1562–2192 °F).

HEAT TREATMENT

Solution annealing at min. 1050 °C (1922 °F), followed by rapid cooling.

SURFACE FINISH

Plates are supplied in pickled condition (bright surface) – 1D / No. 1 Finish.

DIMENSIONS

SINOXX 4948	Thickness [mm]	Max. width [mm]	Max. length [mm]	Max. weight [kg]
Quarto plates	6.5–8.0 (0.26–0.31 in.)	2150 (84.65 in.)	12000 (472.44 in.)	9600 (21164 lbs)
Quarto plates	8.0–130.0 (0.31–5.11 in.)	2500 (98.42 in.)	12000 (472.44 in.)	9600 (21164 lbs)

The information and data in this product data sheet are intended for informative purpose only and may be revised at any time without notice. Presented typical properties of the materials are described only to help readers make their own evaluations and decisions. They are not guaranteed.