

SINOXX^{...} 4301, 4307

AUSTENITIC STAINLESS STEELS

SINOXX 4301 and **SINOXX 4307** are the most widely used austenitic stainless-steel grades supplied to numerous industry sectors. Their mechanical properties, chemical composition, corrosion resistance and weldability provide the best all-around performance stainless steel grades at a relatively low cost. The austenitic structure gives these grades an excellent toughness.

SINOXX 4301 can be severely deep drawn without intermediate annealing. It has excellent forming and welding characteristics. **SINOXX 4307** is resistant to carbide precipitation. It does not require post-weld annealing. It is extensively used in heavy gauge components where the absence of precipitations is often required.

APPLICATIONS

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

SPECIFICATIONS

SIJ	AISI	UNS	EN	Standards
SINOXX 4301	304	S30400	1.4301	ASTM A240/A240M, ASME SA240/SA240M, EN 10088-2, EN 10088-4, EN 10028-7
SINOXX 4307	304L	S30403	1.4307	

CHEMICAL COMPOSITION [wt. %]

	C	Mn	P	S	Si	Cr	Ni	N
SINOXX 4301	0.035	1.60	0.035	0.0010	0.35	18.0–18.3	8.0-8.3	0.1
SINOXX 4307	0.025	1.80	0.035	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]
SINOXX 4301	210	520–720	45	201	100
SINOXX 4307	200	500–700	45	201	100

CORROSION RESISTANCE

SINOXX 4301 and SINOXX 4307 have good corrosion resistance in moderately aggressive organic acids and oxidising environments. SINOXX 4307 may show a lower corrosion rate than SINOXX 4301 and has better resistance to intergranular corrosion of welds and heat-affected zones. Due to a lower nickel and molybdenum content, they offer a cost-effective alternative to SINOXX 4401.

Grade	Tested per the following corrosion standards
SINOXX 4301	ASTM A262 Practice A, ASTM A262 Practice E, EN ISO 3651-2 Method A
SINOXX 4307	

HOT FORMING

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

HOT 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 4301/4307	Thickness [mm]	Max. width [mm]	Max. length [mm]	Max. weight [kg]
Quarto plates	7.0–8.0 (0.28–0.31 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.