

SINOXX^{...} 4571

AUSTENITIC STAINLESS STEELS

SINOXX 4571 is an austenitic stainless steel that contains chromium, nickel, molybdenum, and titanium. The addition of titanium prevents the formation of chromium carbides at grain boundaries, enhancing the resistance to intragranular corrosion at high temperatures. This steel grade has excellent welding properties and is suitable for cold forming. Additionally, it can withstand temperatures up to 550 °C.

APPLICATIONS

- Automotive industry
- Shipbuilding
- Seamless/welded tubes
- Petrochemistry
- Valves
- Pressure vessel construction

SPECIFICATIONS

SIJ	AISI	UNS	EN	Standards
SINOXX 4571	316Ti	S31635	1.4571	ASTM A240/A240M, ASME SA240/SA240M, EN 10088-1, EN 10088-2, EN 10088-3, EN 10088-4, EN 10028-7

CHEMICAL COMPOSITION [wt. %]

	C	Mn	P	S	Si	Cr	Ni	Mo	Ti
SINOXX 4571	0.05	1.90	0.035	0.001	0.35	17.0–17.3	10.5–10.8	2.0–2.3	Ti=5.0(C+N)min.

PHYSICAL PROPERTIES

Density [g/cm ³]	Specific heat [J/kgK]*	Thermal conductivity [W/mK]*	Electrical resistivity [Ωmm ² /m]*	Magnetisation
8.0	500	15	0.75	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]
220	520–670	40	217	100

CORROSION RESISTANCE

SINOXX 4571 is an austenitic stainless steel stabilized with titanium. In comparison with the standard chromium-nickel austenitic stainless steels, such as SINOXX 4301 and SINOXX 4401, it offers improved resistance to general, pitting and crevice corrosion. The addition of titanium prevents the formation of chromium carbides at grain boundaries, enhancing the resistance to intragranular corrosion at high temperatures.

Grade	Tested per the following corrosion standards
SINOXX 4571	ASTM A262 Practice A, ASTM A262 Practice E, EN ISO 3651-2 Method A

HOT FORMING

The hot forming temperature ranges between 950 °C and 1200 °C (1742–2192 °F).

HEAT TREATMENT

Solution annealing at min. 1070 °C (1958 °F), followed by rapid cooling.

SURFACE FINISH

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

DIMENSIONS

SINOXX 4571	Thickness [mm]	Max. width [mm]	Max. length [mm]	Max. weight [kg]
Quarto plates	7.0–8.0 (0.28–0.31 in.)	2000 (78.74 in.)	12000 (472.44 in.)	9600 (21164 lbs)
Quarto plates	8.0–130.0 (0.31–5.11 in.)	2500 (98.43 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.