

SINOXX^{...} 4435

AUSTENITIC STAINLESS STEELS

SINOXX 4435 is an acid-resistant chromium-nickel-molybdenum austenitic stainless steel. Due to the combination of certain alloying elements, such as nickel, the formation of delta ferrite in the microstructure is reduced or eliminated. The higher addition of molybdenum in SINOXX 4435 provides better pitting resistance than SINOXX 4404, along with excellent mechanical, corrosion-resistant, strength and creep resistance properties. Additionally, this austenitic steel exhibits excellent toughness at cryogenic temperatures.

APPLICATIONS

- Pipes
- Fittings
- Medical
- Nuclear industry
- Marine
- Heat exchangers

SPECIFICATIONS

SIJ	AISI	UNS	Standards
SINOXX 4435	316L	S31603	EN 10088-1, EN 10088-2, EN 10088-4, EN 10028-7, ASTM A240/A240M, ASME SA240/SA240M

CHEMICAL COMPOSITION [wt. %]

	C	Mn	P	S	Si	Cr	Ni	Mo	N
SINOXX 4435	0.025	1.9	0.035	0.0010	0.35	17.5–17.8	12.5–12.8	2.5–2.8	0.1

We guarantee that the chemical composition and degree of residual ferrite comply with the standard for the chemical industry "Basler Norm 2, BN2".

PHYSICAL PROPERTIES

Density [g/cm ³]	Specific heat [J/kgK]*	Thermal conductivity [W/mK]*	Electrical resistivity [Ωmm ² /m]*	PREN**	Magnetisation
8.0	500	15	0.75	26	No

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

** (Cr%) + 3.3 (Mo%) + 16 (N%)

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	45	217	100

CORROSION RESISTANCE

SINOXX 4435 is a stainless-steel alloy that offers improved corrosion resistance and formability compared to SINOXX 4404. It has a higher content of molybdenum and nickel. SINOXX 4435 has a very low carbon content which helps in reducing intergranular corrosion after welding. Additionally, the increased amount of molybdenum in the material provides an even higher level of resistance against corrosion.

Grade	Tested per the following corrosion standards
SINOXX 4435	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).

HOT TREATMENT

Solution annealing at min. 1080 °C (1976 °F), followed by rapid cooling.

SURFACE FINISH

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

DIMENSIONS

SINOXX 316H	Thickness [mm]	Max. width [mm]	Max. length [mm]	Max. weight [kg]
Quarto plates	7.0–10.0 (0.28–0.39 in.)	2000 (78.74 in.)	12000 (472.44 in.)	9600 (21164 lbs)
Quarto plates	10.0–130.0 (0.39–5.11 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.