

SINOXX^{...} 4307S

FREE MACHINING AUSTENITIC STAINLESS STEEL

SINOXX 4307S is a chromium-nickel austenitic stainless steel with the addition of sulphur. The basic stainless steel SINOXX 4307 provides good mechanical properties, corrosion resistance and weldability at a relatively low cost. Due to the added sulphur in SINOXX 4307S, manganese sulphides are formed, which can offer higher machining speeds and improve cutting tool life. These non-metallic inclusions can provide a source of solid lubricant to the tool/workpiece interface.

Given their similar composition and characteristics, stainless steel grades SINOXX 4307S and SINOXX 4307 can become dually certified.

APPLICATIONS

- Automotive industry
- Flanges and fittings
- General construction
- Processing equipment

SPECIFICATIONS

SIJ	AISI	UNS	EN	Standards
SINOXX 4307S	304LS	S30403	1.4307	ASTM A240/A240M, ASME SA240/SA240M, EN 10088-2, EN 10088-4

CHEMICAL COMPOSITION [wt. %]

	C	Mn	P	S	Si	Cr	Ni	N
SINOXX 4307S	0.025	1.20	0.035	0.020-0.030	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]
200	500-700	45	201	100

CORROSION RESISTANCE

SINOXX 4307S is not recommended for use in marine environments and highly oxidizing chemical environments. Special care should be taken when using SINOXX 4307S in acidic or chloride environments where corrosion by pitting and cracking may occur.

The use of SINOXX 4307S is compatible with all types of fluids, lubricants and grease applied in industry and machining. Optimum corrosion resistance is achieved with a surface free from residual machining oils or foreign particles.

MACHINABILITY

SINOXX 4307S guarantees exceptional machinability performance compared to SINOXX 4307, especially in demanding cutting conditions. Its performance is based on very good chip breaking, increased tool service life and very good surface finish after machining.

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 4307S	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.