

First choice for container construction and the food industry

Information about **AISI 304H | S30409 | 1.4301 X5CrNi18-10**

Material 304H is an austenitic chromium-nickel steel used in a wide range of applications due to its good machinability, good corrosion resistance and numerous surface treatment options such as final polishing, grinding or brushing.

Thanks to its higher carbon content compared to grade 1.4301, this material has excellent heat resistance at elevated temperatures. AISI 304H has limited resistance to intergranular corrosion at high temperatures or in the welded condition. If welding cannot be avoided, the use of the material 1.4307 is advised.

WELDING

The material can be welded with and without filler metal (e.g. 1.4316). The maximum temperature for holding is 200°C. If the carbon content is in the upper range, solution annealing is required after welding. If heat treatment is not intended, the use of the low carbon material 1.4307 is recommended. The heat input during welding influences the corrosion resistance.

AVAILABLE DIMENSIONS

Round bars:

30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150 mm



APPLICATIONS

- Reactor technology
- Industrial boilers
- Heat exchangers
- Construction industry
- Electronic equipment
- Automotive industry
- Container construction
- Architectural elements
- Food industry
- Chemical industry
- Decorative purposes and kitchen furnishings
- Oil industry / petrochemical industry
- Pipeline construction

CLAMPING

Like all austenitic materials, AISI 304H tends to strain harden during machining. Therefore, the depth must be chosen that deep, that the hardened area is below.

MECHANICAL CHARACTERISTICS AT ROOM TEMPERATURES

Stated values apply to steel bars up to max. 160 mm
(ASTM A 479)

Yield strength Rp0,2 (N/mm²): min. 205	Elongation at break 4D (%): longitudinal: min. 30
Tensile strength Rm (N/mm²): min. 515	Impact value (ISO-V) J: min. 100

HEAT TREATMENT

Hot forming: 900 – 1200 °C	Cooling: Air or water
Solution annealing: 1000 – 1100 °C	

CHEMICAL ANALYSIS

chemical element	304H	
	min.	max.
C	-	0.04-0.10
Si	-	1.0
Mn	-	2.0
P	-	0.045
S	-	0.03
Cr	17.5	18.0-20.0
N	0.1	-
Ni	8.0	10.5

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INOX INTELLIGENCE.

Note: All information regarding material properties, recommendations for use of the material, and available delivery configurations have been carefully researched, and is provided according to the best of our knowledge. However, no guarantee is made for the information provided. In the case of orders, all information and data must always be agreed in a separate written agreement.