



Ferritic Stainless Steel NAS 550	
ASTM Designation	EN Designation
436	1.4513
S43600	X2CrMoTi17-1

DESCRIPTION

NAS 550 is a titanium stabilized ferritic stainless steel with molybdenum addition. It exhibits a remarkable combination of high temperature resistance, good forming properties and high resistance to localized corrosion, thanks to the Mo addition. NAS 550 is an alternative to the AISI 304 in shaped components used in medium-severe environments.

**CHEMICAL
COMPOSITION**

C	Si	Mn	P	S	Cr	Mo	Ti
≤ 0.12	≤ 1.00	≤ 1.00	≤ 0.040	≤ 0.030	16.00-18.00	0.75 - 1.25	≥ 0.20 +4 (C+N)

APPLICATIONS

- Exhaust systems
- Tubes
- Household electrical appliances

**MECHANICAL
PROPERTIES AFTER
COLD ROLLING AND
FINAL ANNEALING**

UTS	65 ksi min
0.2% YS	35 ksi min
Elongation	22% min
Hardness	max 89 HRB

**PHYSICAL
PROPERTIES**

At 68 °F, it has a density of 0.276 lb/in³ and a specific heat of 0.11 Btu/lb/°F

Modulus of Elasticity (x10 ⁶ psi)	29.0
Coefficient of Thermal Expansion, 68-212°F, /°F	5.6 x 10 ⁻⁶
Thermal conductivity (Btu/hr•ft•°F)☒	13.0
Electrical resistivity (Micro ohm-in)	23.6

WELDING

The recommended consumable electrodes are:

Shielded electrodes	Wires and rods	Hollow electrodes
E 23 12 L	W 23 12 L (GTAW) P 23 12 L (PAW)	T 23 12 L
ER 308L	S 23 12 L (SAW) ER 308L	308L
2R 316L	ER 316L	ER 316L

**CORROSION
RESISTANCE**

NAS 550 has good pitting corrosion resistance by hydrochloric, due to the addition of Cr and Mo, which makes it suitable for some typical AISI 304 applications. It is resistant to industrial environments and can withstand the condensation in exhaust systems.

**OXIDATION
RESISTANCE**

NAS 550 exhibits good resistance to oxidizing sulphur-free environments up to 1740°F.

**SURFACE
CLEANING**

Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the surface. Then, always rinse the stainless steel with water to remove completely the cleaning agent. Finally, it is recommended to dry the surface to preserve a good superficial condition. In severe environments, a frequent cleaning is strongly recommended.

SPECIFICATIONS

It can be delivered according to ASTM A-240 and EN 10088-2 standard requirements.