



| Austenitic 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.