



| AUSTENITIC STAINLESS STEEL |                  |
|----------------------------|------------------|
| EN DESIGNATION             | ASTM DESIGNATION |
| 1.4541                     | 321              |
|                            | S32100           |

**Description:**

Type 321 is a stabilized stainless steel which offers as its main advantage an excellent resistance to intergranular corrosion following exposure to temperatures in the chromium carbide precipitation range from 800 to 1500° F (427 to 816° C). Type 321 is stabilized against chromium carbide formation by the addition of titanium.

**Chemical Composition:**

| C       | S      | P       | Mn    | Si     | Cr        | Ni       | N      | Ti     |
|---------|--------|---------|-------|--------|-----------|----------|--------|--------|
| ≤ 0.080 | ≤0.030 | ≤ 0.045 | ≤2.00 | ≤ 0.75 | 17.0-19.0 | 9.0-12.0 | ≤ 0.10 | ≤ 0.70 |

**Mechanical Properties:**

| Rm (MPa) | Rp0.2 (MPa) | A50 (%) | HRBW |
|----------|-------------|---------|------|
| ≥ 515    | ≥ 205       | ≥ 40    | ≤ 95 |

**Applications:**

Aircraft piston engine manifolds, expansion joints, thermal oxidizers, refinery equipment and high temperature chemical process equipment.

**Stress Corrosion Cracking**

Type 321 austenitic stainless steel is susceptible to stress corrosion cracking (SCC) in halides similar to Type 304 stainless steel. Stresses may result from cold deformation during forming operations, or from thermal cycles encountered during welding operations. Type 321 is a good choice for service in the stress-relieved condition in environments which might otherwise cause intergranular corrosion for unstabilized alloys.

**Surface Cleaning:**

Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the stainless steel. 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 EN, ASTM, ASME standard requirements.