

446 Stainless Steel (UNS S44600)

Description

High chromium, non-hardenable stainless steel with excellent corrosion resistance.

Advantages

- ✓ Excellent resistance to:
 - Corrosion and oxidation
 - Corrosion scaling
 - Sulfidizing atmospheres
 - Abrasion

Limitations

- ✓ Not suitable for strongly reducing environments (e.g., hydrochloric acid)

Maximum exposure temperature

2000°F (1100°C)

Thermal Conductivity

Low (20.9 W/mK at 100°C)

Typical applications

- ✓ Boiler tubes, preheaters and heat exchangers
- ✓ Cement kilns
- ✓ Waste heat boilers
- ✓ Molten lead
- ✓ Salt baths
- ✓ Heat treating
- ✓ Incinerators

Chemical composition

Ni	0.25%*
Cr	23%-27%
Fe	Remainder
Si	1%*
Mn	1.5%*
P	0.04%*
C	0.2%*
S	0.030%*

*Maximum