

304 Stainless Steel (UNS S30400)

Description

The “workhorse” of stainless steels – a corrosion resistant Ni-Cr steel with low carbon content.

Advantages

- ✓ Good resistance to corrosion and oxidation
- ✓ Good mechanical strength
- ✓ Resists most oxidizing acids and salt spray.

Limitations

- ✓ Not suitable for strongly reducing environments (e.g., hydrochloric acid)
- ✓ Can embrittle above 900°F

Maximum exposure temperature

2100°F (1150°C)
Continuous service to 925°C

Thermal Conductivity

Low (16.2 W/mK at 100°C)

Typical applications

- ✓ A wide variety, including food, plastics and petrochemical

Chemical composition

Ni	8%-10.5%
Cr	18%-20%
Fe	Remainder
Si	1%*
Mn	2%*
P	0.045%*
C	0.08%*
S	0.030%*

*Maximum