

Technical datasheet

Alloy 625 | 2.4856

Major specifications

| | | | | |
|------------|------------|----------|----------|--------------|
| UNS N06625 | ASTM B 446 | AMS 5666 | AMS 5599 | NACE MR-0175 |
|------------|------------|----------|----------|--------------|

Available product forms

Round bars

The current stock range can be found on www.sd-metals.com. Further dimensions available upon request.
Use our Service Centre to have the available sizes cut to your desired dimensions.

Key features

Alloy 625 is used due to its high strength and excellent corrosion resistance in aqueous media as well as in high temperature oxidizing and carburizing environments. The high chromium and molybdenum content provides a high degree of pitting and crevice corrosion resistance to chloride-containing media such as seawater, neutral salts and salt solutions. The Alloy is highly resistant to chloride stress corrosion cracking due to its high nickel content. The strength of Alloy 625 is derived from the matrix-strengthening effect of molybdenum and niobium, which means hardening heat treatments are unnecessary. Alloy 625 retains its excellent ductility and toughness at cryogenic temperatures. It also has excellent malleability and is easy to weld.

Applications

- seals and closures
- piping and extraction systems
- motorsport exhaust systems
- bellows and expansion joints
- furnace equipment
- valve components

Chemical properties

Composition - limits in %

| Ni | Cr | Mo | Fe | Nb | Mn | Si | Al | Ti | C |
|-----------|-------------|------------|----------|-------------|-----------|-----------|-----------|-----------|-----------|
| min. 58,0 | 20,0 - 23,0 | 8,0 - 10,0 | max. 5,0 | 3,15 - 4,15 | max. 0,50 | max. 0,50 | max. 0,40 | max. 0,40 | max. 0,10 |

Physical and thermal properties

| | |
|----------------------------------|------------------------|
| Density | 8,44 g/cm ³ |
| Melting temperature | 1290 - 1350 °C |
| Thermal conductivity | 9,8 W/m • °C |
| Expansion coefficient at 21-93°C | 12,8 µm/m • °C |

Typical mechanical properties (room temperature)

| | |
|------------------|--------------|
| Yield strength | min. 330 MPa |
| Tensile strength | min. 730 MPa |
| Elongation | min. 35 % |

All information is subject to change without notice.

The properties correspond to the material in the heading. They may vary for other specifications.

Please contact us for more details.