

Technical datasheet

Alloy 400 / W-Nr. 2.4360/2.4361

A nickel-copper alloy with good strength and excellent corrosion resistance used for marine engineering and chemical processing equipment.

Available products

Product form	Size range from	Size range to
Sheet/plate	0.5 mm thickness	40.0 mm thickness
Bar	6.0 mm diameter	200.0 mm diameter
Tube/pipe	10.0 mm outside diameter	219.1 mm outside diameter

Chemical composition (%)

Ni	Cu	Fe	Mn	S	Si	C
63.0 min	28.0-34.0	1.0-2.5	2.0 max	0.024	0.5 max	0.3 max

Major specifications

ASTM B127, B163, B164, B165, B366, B564, B829	UNS N04400
NACE MR-0175, VdTUV 263	DIN 17750, 17752

Physical properties

Density	8.80 g/cm ³
Melting range	1300-1350°C

Mechanical properties – typical room temperature properties

Yield strength	240 MPa
Tensile strength	550 MPa
Elongation	40 %

Key attributes

Alloy 400 has good strength and toughness over a wide temperature range. At sub-zero temperatures the strength increases with only a slight negative effect on the ductility and impact resistance. It has excellent corrosion resistance in reducing media and is resistant to chloride induced stress corrosion cracking and pitting in fresh and industrial process waters. In sea water Alloy 400 exhibits very low corrosion rates and has excellent resistance to neutral and alkaline salts. It has excellent resistance to hydrofluoric acid and resists most sulphuric and hydrochloric acids under reducing conditions.

Alloy 400 is highly fabricable and is readily formed by either hot or cold working processes. It is machinable and can be welded by conventional processes and procedures. Please contact us for further details on forming, fabrication and welding consumables.

Applications

Marine engineering valves, pump and propeller shafts
Heat exchangers in the chemical processing industry
Brine heaters and evaporators
Fittings and fasteners
Electrical and electronic applications
Sulphuric and hydrofluoric acid systems

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.