

Technical datasheet

Alloy C-276 / W-Nr. 2.4819

A nickel-chromium-molybdenum alloy with additions of tungsten which has excellent corrosion resistance in a wide range of aggressive corrosive environments.

Available products

Product form	Size range from	Size range to
Sheet/plate	0.5 mm thickness	4.0 mm thickness
Bar	12.0 mm diameter	100.0 mm diameter
Tube/pipe	13.7 mm outside diameter	219.1 mm outside diameter

Chemical composition (%)

Ni	Cr	Mo	Fe	W	Co	Mn	C
Balance	14.5-16.5	15.0-17.0	4.0-7.0	3.0-4.5	2.5 max	1.0 max	0.01 max

Major specifications

ASTM B462, B564, B574, B575, B622 NACE MR-0175	UNS N10276 DIN 17751, 17752, 17753, 17754
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Physical properties

Density	8.89 g/cm ³
Melting range	1325-1370°C

Mechanical properties – typical room temperature properties

Yield strength	363 MPa
Tensile strength	758 MPa
Elongation	62 %

Key attributes

A nickel-chromium-molybdenum alloy with excellent corrosion resistance in a range of corrosive media such as sulphuric, phosphoric and hydrochloric acids, various reducing and oxidising acids, solvents and chlorine solutions. Thanks to its high molybdenum content it has particularly high resistance to localised corrosion such as pitting and crevice corrosion. It also has excellent resistance to sea water including under crevice conditions. The low carbon-content minimises carbide precipitation during welding – the resulting welds maintaining corrosion resistance in the heat affected zone.

Alloy C-276 is readily machined, formed and welded by conventional processes and techniques. Please contact us for further details on forming, fabrication and welding consumables.

Applications

Chemical processing – heat exchangers, evaporators, reaction vessels, piping
Air pollution control – scrubbers, ducting, reheaters
Industrial waste treatment
Pulp and paper processing

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