MULTIAlloys

ADDING VALUE THROUGH EXPERIENCE

ALLOY C276 | ALLOY INFORMATION SHEET | UNS N10276 W Nr 2.4819

HEAT AND/OR CREEP RESISTANT CORROSION RESISTANT OTHER

Alloy C276 is a solid-solution strengthened, nickel-chromium-molybdenum alloy which is characterized by an extraordinary corrosion resistance across a wide range of corrosive aqueous and organic media. Alloy C276 has excellent resistance to pitting and stress corrosion cracking in the presence of chlorides and other halides. It also displays excellent resistance to corrosion by seawater especially under crevice conditions, which encourage attack in other commonly used materials. Alloy C276 can be easily welded and processed applying standard shop fabrication practices for austenitic stainless steels and nickel based alloys.

Alloy C276 is a long and well established grade often selected in a wide range of applications involving oxidizing and/or reducing media, contaminated and complex corrodents, seawater and process solutions. Applications exist in minerals processing, chemical and petro-chemical industries, waste treatment and air pollution control, pulp and paper production and the pharmaceutical industries. Its long track record of successful use has resulted in Alloy C276 being more readily available and in a wider range of product forms than other similar grades in the “Alloy C” suite of alloys.

NOMINAL COMPOSITION (%)

	Ni (Bal)	Cr	Mo	Fe	W	C	Other
ALLOY C276	57	16	16	5	4	0.02 max	Si – 0,08% max
							Co – 2.5% max

APPLICABLE SPECIFICATIONS

PLATE, SHEET & STRIP	ASTM B575
PIPE, TUBE	ASTM 622 or B619
BAR	ASTM B574
FASTENERS	
FORGINGS	ASTM B564
FITTINGS	ASTM B366 or B462
WELDING PRODUCTS	ENiCrMo-4 / ERNiCrMo-4

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH (MPa)	785
YIELD STRESS (MPa)	365.
ELONGATION (% in 50mm)	50%
HARDNESS (Rockwell B)	87

TYPICAL PHYSICAL PROPERTIES

DENSITY (kg / cu m.)	8890
YOUNGS MODULUS (GPa)	205
THERMAL CONDUCTIVITY (W/m.C)	10.5
THERMAL EXPANSION (per Deg C)	0.0000112

 # - At room temperature

FABRICATION

Alloy C276 can be readily welded using inert gas or SMA processes. Matching fillers are available. For very demanding corrosion conditions, in which the weld joint may be at risk, alternative filler metals may be selected. Eg E/ERNiCrMo-14

The machining of Alloy C276 needs to be approached with caution as it work hardens far more readily than do austenitic steels which most users may be familiar with. It is thus essential that tooling, speeds and feeds are set at optimum at the start.

Comprehensive fabrication information available on request.

Please call for details of Stock, Delivery and Price

Detailed technical data available upon request

Note: Data shown are typical and full research should be done to determine the usefulness in any application or design. No warranty is expressed or implied and we assume no responsiblity for the accuracy, completeness or usefulness of the content.

PO BOX 30407, Kyalami, 1684, South Africa **T:** +27 (0) 11 466 2480 **F:** +27 (0) 11 466 1692
Sharecall: 0860 ALLOYS **E:** sales@multialloys.co.za **www.multialloys.co.za**