

ALLOY C-276

Alloy C-276 is a nickel-molybdenum-chromium-tungsten alloy with excellent general corrosion resistance and good fabricability. The alloy used in various environments where resistance to hot contaminated mineral acids, organic and inorganic chloride-contaminated media, chlorine, formic and acetic acids, acetic, acetic anhydride, sea water and brine solutions is desired.



QUKEN OFFERS ALLOY C-276 IN FOLLOWING FORMS:

Product form	Standard	Size available mm
Strip	ASME SB575	0.05~3.0*3~540*C
Sheet	ASME SB575	1~6*1000~2000*2000~6000
Plate	ASME SB575	6~25*1000~2000*2000~6000
Flanges	ASME SB366	Custom
Seamless pipe/tube	ASME SB622	φ5~219*0.5~8.18*9000 Max
Welded pipe/tube	ASME SB619 ASME SB626	φ40~630*2~16*13000 Max
Bar	ASME SB574	φ3.5~200*100~6000
Wire	ASME SB574	φ1~3*C
Pipe fittings	ASME SB366	Custom
Forgings	ASME SB564	Custom

DESIGNATIONS AND STANDARDS:

Standard	Material designation
EN	2.4819 - NiMo16Cr15W
ISO	NiMo16Cr15Fe6W4
UNS	N10276
AFNOR	NC17D

CHEMICAL COMPOSITION %:

	Ni	Cr	Fe	Mo	W	Co
MIN.	Bal.	14.5	4.0	15.0	3.0	
MAX.	Bal.	16.5	7.0	17.0	4.5	2.5
	Mn	S	Si	C	V	P
MAX.	1.0	0.03	0.08	0.01	0.35	0.04

CORROSION RESISTANCE PERFORMANCE:

Test Environment (Boiling)	Corrosion Rate (mpy)
45% Formic Acid	2.33
10% Oxalic Acid	11.28
20% Phosphoric Acid	0.32
10% Sulfuric Acid	15.45
20% Acetic Acid	0.57
10% Hydrogen bromide	0.75
50% Sodium Hydroxide	1.03

Data are typical, are provided for informational purposes, and should not be construed as maximum or minimum values for specification or for final design, or for a particular use or application.

PHYSICAL CONSTANTS:

Density	0.321 lb/in ³ , 8.89g/cm ³
Melting Point (Approx.)	1325°C
Electrical Resistivity	130 Microhm•cm
Thermal Expansion Coefficient (25° to 100°C)	11.2 x 10 ⁻⁶ / °C
Thermal Conductivity	10.2 W/m•K
Magnetic Attraction	None

MECHANICAL PROPERTIES (RT) :

Yield Strength 0.2% Offset		Tensile Strength		Elongation In 2 inches	Hardness
KSI	MPa	KSI	MPa	%	HRB
52	356	115	792	61	100 Max

APPLICATIONS:

- Pressure Vessels
- Reactors
- Scrubbers
- Mixers and Agitators
- Evaporators
- Heat Exchangers
- Pumps and Valves
- Dampers
- Venturis
- Solvent Recovery Plants



Pressure Vessels



Evaporators