



BRODER METALS GROUP

Alloy C276

Broder Metals Group Ltd's Alloy C276 is another nickel-molybdenum-chromium superalloy addition to our range of corrosion resistant materials.

Standards:

ASTM B574, UNS N10276, Werkstoffe 2.4819

Corrosion resistance:

C276 is resistant to pitting, stress corrosion cracking, and crevice corrosion in a wide range of chemical environments, particularly in chloride gas, hypochlorite and chlorine dioxide solutions. Meanwhile the chromium content adds resistance to oxidizing media, such as ferric and cupric chlorides. To complete the overall corrosion resisting properties, tungsten is present to provide additional general resistance in a wide range of severe environments.

Welding properties are good, with the low carbon content minimizing carbide / grain boundary precipitation during welding to maintain corrosion resistance in the welded finished condition.

Applications:

Alloy C276 can be used in the most severe environments such as chemical and petrochemical processing involving bleach, pollution control, pulp and paper production, industrial and municipal waste treatment, pharmaceutical and food processing equipment, and process plant involved in the recovery of sour natural gas.

Alloy C276 is ideal for use in evaporators, heat exchangers, sulphuric acid filters and reactors, and process plant handling acid catalysts.

We stock bar material in the size range: 10 mm dia to 250 mm dia.

Technical Data:

Alloy C276 Condition:

Material is supplied in the annealed condition, and either centreless ground (up to 12.7 mm dia) or peeled. Diameter tolerances are either h9 (up to 12.7 mm dia) or k12 above.

Alloy C276 nominal chemical composition (percent):

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

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Alloy C276 bar mechanical properties at room temperature:

Tensile Strength Minimum		Yield Strength (0.2% offset) minimum		Elongation in 2" or 4D minimum
Ksi	MPa	Ksi	MPa	%
100	690	41	283	40

Material is tested at room temperature in the longitudinal direction. There is no reduction of area or hardness requirement in ASTM B574, although hardness is usually supplied to a maximum of 325 HBW (10/3000) / 35 HRC. Similarly, ASTM B574 does not call for impact test results, but a minimum average of 96 Joules (67 Joules minimum single result) can be expected at room temperature.

Material is supplied with a homogeneous microstructure and free from inclusions, porosity & other defects.

We can carry out other tests to meet customer requirements.

Alloy C276 Density:

8.87 g/ cubic cm

Alloy C76 is just one of a range of corrosion resistant materials stocked by Broder Metals Group Ltd – please see our website for the full range stocked: www.broder-metals-group.com

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