

Oxford Alloy® C-276

AWS ENiCrMo-4 • Nickel Alloys



Key Features

- ❖ Used for welding materials of similar composition. This low carbon, nickel-chromium-molybdenum filler metal can also be used for dissimilar welding between nickel base alloys and stainless steels, as well as for surfacing and cladding.
- ❖ Due to high molybdenum content, this alloy offers excellent resistance to stress corrosion cracking and pitting and crevice corrosion.

Conformances

AWS/ASME SFA 5.11

ENiCrMo-4

UNS W80276

Chemical Composition - As required per AWS 5.11

C	Mn	Si	Fe	Mo	W	S
0.02 max	1.0 max	0.2 max	4.0-7.0	15.0-17.0	3.0-4.5	0.03 max
P	Cr	Ni	Cu	V	Co	OET
0.04 max	14.5-16.5	Bal	0.50 max	0.35 max	2.5 max	0.50 max

Mechanical Properties - As required by AWS 5.11

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	690 (100) min	Not Specified	25 min
Typical Results - As welded	730 (106)	540 (78)	39

Typical Welding Parameters

Diameter		Process	Volt	Amps (flat)	Amps (V/OH)
in	(mm)				
3/32	(2.4)	SMAW	24-28	70-85	65-75
1/8	(3.2)	SMAW	26-30	85-110	80-90
5/32	(4.0)	SMAW	28-32	110-140	100-120
3/16	(4.8)	SMAW	28-32	120-160	110-130

Diameters & Packaging

Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Length (in)	Packaging (lbs)	Diameter (mm)	Length (mm)	Packaging (kgs)
3/32"	12	10 lb tube 30 lb carton	2.6	300	4 kg tube 12 kg carton
1/8"	14	10 lb tube 30 lb carton	3.2	350	5 kg tube 15 kg carton
5/32"	14	10 lb tube 30 lb carton	4.0	350	5 kg tube 15 kg carton
3/16"	14	10 lb tube 30 lb carton	5.0	350	5 kg tube 15 kg carton

Actual test results may vary. Refer test result disclaimer on page 160.