



CEWELD NiCrMo 59

TYPE	Nickel-Chromium-Molybdenum based alloy for gas metal arc welding																
APPLICATIONS	Applications of NiCrMo 59 in aggressively corrosive media include scrubbers for flue gas desulphurization (FGD), digesters and papermaking equipment, chemical process plants, corrosion resistant overlays and in severe offshore and petrochemical environments.																
PROPERTIES	CEWELD NiCrMo 59 weld deposit composition of 59%Ni-23%Cr-16%Mo is designed to match the nickel base corrosion resistant alloy commonly known as alloy 59. The high level of Mo is similar to alloys C276 and C4 but performance in a wide range of more oxidizing media is significantly enhanced by increasing Cr to 23% in alloy 59. Total alloying exceeds the level typically present in alloy C22; it is therefore considered suitable for welding this group of alloys. Alloy 59 consumables also provide strong, tough Nb-free weld metal for dissimilar welds in Superaustenitic and Superduplex stainless steels or combinations of these with nickel base alloys. Some authorities do not allow or have discontinued use of 625 type consumables for such applications, where deleterious Nb-rich precipitates may form in diluted or partially mixed regions around the fusion boundary. Alloy C276 is possibly a more economic alternative depending on the required properties in this situation.																
CLASSIFICATION	<table border="0"> <tr> <td>AWS</td> <td>A 5.14: ERNiCrMo-13</td> </tr> <tr> <td>EN ISO</td> <td>18274: S Ni 6059(NiCr23Mo16)</td> </tr> <tr> <td>W.Nr.</td> <td>2.4607</td> </tr> <tr> <td>F-nr</td> <td>43</td> </tr> <tr> <td>FM</td> <td>6</td> </tr> </table>	AWS	A 5.14: ERNiCrMo-13	EN ISO	18274: S Ni 6059(NiCr23Mo16)	W.Nr.	2.4607	F-nr	43	FM	6						
AWS	A 5.14: ERNiCrMo-13																
EN ISO	18274: S Ni 6059(NiCr23Mo16)																
W.Nr.	2.4607																
F-nr	43																
FM	6																
SUITABLE FOR	duplex, super-duplex and super-austenitic stainless steels, nickel alloys such as UNS N06059 and N06022, INCONEL alloy C4, C-276, and INCONEL alloys 622, C22, 625, and 686 CPT, Alloy 31, Alloy 59, 1.4562, 2.4605, 2.4602, 2.4610, 2.4819, NiCr21Mo14W, NiCr23Mo16Al, NiMo16Cr15Ti, NiMo16Cr15W																
APPROVALS																	
WELDING POSITIONS																	
TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%)	<table border="1"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>Fe</th> <th>Al</th> </tr> </thead> <tbody> <tr> <td>0.009</td> <td>0.08</td> <td>0.2</td> <td>23</td> <td>65</td> <td>16</td> <td>1</td> <td>0.2</td> </tr> </tbody> </table>	C	Si	Mn	Cr	Ni	Mo	Fe	Al	0.009	0.08	0.2	23	65	16	1	0.2
C	Si	Mn	Cr	Ni	Mo	Fe	Al										
0.009	0.08	0.2	23	65	16	1	0.2										
MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">Heat Treatment</th> <th rowspan="2">R_{p0,2} (MPa)</th> <th rowspan="2">R_m (MPa)</th> <th rowspan="2">A₅ (%)</th> <th colspan="2">Impact Energy (J) ISO-V</th> <th rowspan="2">Hardness</th> </tr> <tr> <th colspan="2">-196°C</th> </tr> </thead> <tbody> <tr> <td>As Welded</td> <td>450</td> <td>720</td> <td>35</td> <td colspan="2">90</td> <td>HRc</td> </tr> </tbody> </table>	Heat Treatment	R _{p0,2} (MPa)	R _m (MPa)	A ₅ (%)	Impact Energy (J) ISO-V		Hardness	-196°C		As Welded	450	720	35	90		HRc
Heat Treatment	R _{p0,2} (MPa)					R _m (MPa)	A ₅ (%)		Impact Energy (J) ISO-V		Hardness						
		-196°C															
As Welded	450	720	35	90		HRc											
REDRYING	Not required																
GAS ACC. EN ISO 14175	I1																



CEWELD NiCrMo 59

NICRMO 59 1,0MM

Packaging	KG/unit	EanCode
BS-300	15	8720663420350
D-100	1	8720663420367

NICRMO 59 1,2MM

Packaging	KG/unit	EanCode
BS-300	15	8720663420374

NICRMO 59 2,4MM

Packaging	KG/unit	EanCode
K-415	25	8720663420435