

NiCro 70/15

CLASSIFICATION

AWS A5.11	ENiCrFe-2*	A-Nr	-	Mat-Nr	2.4807
ISO 14172	E Ni 6182* (NiCr15Fe6Mn)	F-Nr	43		
*:Deviation,see remarks		9606 FM	6		

GENERAL DESCRIPTION

Fully basic all position NiCr electrode
High creep resistance up to 815°C
High resistance to embrittlement
High toughness at low temperature [-196°C]
For welding, Ni base alloys (as Alloy 600) and dissimilar joints
High resistance to carburization

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

CURRENT TYPE

DC +

APPROVALS

TÜV

+

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr	Ni	Nb	Fe
0.02	4.4	0.45	18.0	bal.	1.9	6

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J)	
					+20°C	-196°C
Required: AWS A5.11	AW	not required	min. 550	min. 30	not required	
ISO 14172		min. 360	min. 550	min. 27	not required	
Typical values		430	680	40	145	130

PACKAGING AND AVAILABLE SIZES

	Diameter (mm) Length (mm)	2.5	3.2	4.0
		300	300	350
PE-Tube	Pieces / unit	90	57	43
	Net weight/unit (kg)	1.6	1.9	2.0

Identification Imprint: NiCro 70/15 Tip Color: silver

NiCro 70/15: rev. C-EN24-01/02/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades	BS 3076	DIN 17742 SEW 470/595	Mat. Nr	ASTM / ACI B366	UNS
Ni base on Cr alloyed steels for high and low temperature service					
		LC-NiCr15Fe	2.4817		N06600
	NA14	NiCr15Fe	2.4816	Alloy600/B168	N06600
		NiCr23Fe	2.4851	Alloy601[H]	N06601
		NiCr60-15	2.4867		N06004
		NiCr80-20	2.4869		N06003
		NiCr20Ti	2.4951	Alloy75	N06075
		NiCr20TiAl	2.4952	Alloy80A	N07080
	NA17	X12NiCrSi36-16	1.4864	330	N08330
		G-X10NiCrNb32-20	1.4859		
	NA15	X10NiCrAlTi32-20	1.4876	Alloy800/800H	N08800/ N08810

Suitable for welding dissimilar metals:

- Mild- and low alloy steel to stainless steel
- Mild- and low alloy steel to Ni base alloys
- Stainless steel to low alloy creep resisting steel

Not sensitive for embrittlement after heat treatment

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (S)*	Energy E(kJ)	Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
2.5 x 300	45-60	DC+	44	63	0.9	175	91	1.59
3.2 x 300	70-100	DC+	52	107	1.3	29.2	52	1.54
4.0 x 350	90-160	DC+	61	214	2.0	51.0	29	1.47

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	PA/1G	PB/2F	Welding positions			
			PC/2G	PF/3Gup	PE/4G	PH/5Gup
2.5	60A	55A	60A	60A	60A	60A
3.2	90A	80A	85A	80A	80A	80A
4.0	120A	120A				

REMARKS / APPLICATION ADVICE

Deviations: chemical composition

Mn = 3.0 - 6.0%

Cr = max. 18.0%

Welding with Heat-Input max. 1.5 kJ/mm

Interpass temperature max. 150°C

AWS: Mn = 1.0 - 3.5%

AWS: Cr = max. 17.0%

ISO: Mn = 5.0 - 10%

ISO: Cr = max. 17%