

NiCro 70/15Mn

CLASSIFICATION

AWS A5.11	ENiCrFe-3	A-Nr	-	Mat-Nr	2.4620
ISO 14172	E Ni 6182 (NiCr15Fe6Mn)	F-Nr	43		
		9606 FM	6		

GENERAL DESCRIPTION

Fully basic all position NiCr electrode
For welding Ni-based alloys (as Alloy 600), claddings and dissimilar metals
High creep resistance up to 815°C
High resistance to embrittlement
High toughness also at low temperature [-196°C]
High resistance to carburization
Extra alloyed with ~6% Mn to provide hot cracking resistance

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

CURRENT TYPE

DC +

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

C	Mn	Si	Cr	Ni	Nb	S	Fe
0.025	5.5	0.4	16.0	bal.	2.0	0.01	6.5

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition		0.2% Proof strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]	Impact ISO-V(J) -196°C
Required: AWS A5.11 ISO 14172 Typical values	AW	not required min. 360 400	min. 550 min. 550 630	min. 30 min. 27 40	not required not required 125

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	300	300	350
PE-Tube	Pieces / unit	91	57	39
	Net weight/unit (kg)	1.6	1.7	1.9

Identification Imprint: NiCrFe-3/ NiCRO 70/15Mn Tip Color: yellow

NiCro 70/15Mn; 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
		GX10NiCrNb32-20	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	Current range	Current type	Arc time - per electrode at max. current -	Energy E[kJ]	Dep. rate H[kg/h]	Weight/ 1000 pcs [kg]	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
Diam. x length [mm]	[A]		[S]*					
2.5 x 300	40-70	DC+	80	119	0.52	17.4	86	1.49
3.2 x 300	70-100	DC+	77	193	0.84	29.0	56	1.61
4.0 x 350	90-140	DC+	74	289	1.7	50.9	29	1.47

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

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

REMARKS / APPLICATION ADVICE

Welding with Heat-Input max. 1.5 kJ/mm
Interpass temperature max. 100°C