

Ni-base electrode

Classification

AWS A5.11M-97 : ENiCrMo-3
 ISO 14172-03 : E Ni 6625 (NiCr22Mo9Nb)

General description

Fully basic Ni-base high CrMoNb alloyed austenitic all position electrode

Extreme high resistance to:

- general and intergranular corrosion
- pitting and crevice corrosion
- stress corrosion cracking

Suitable for welding dissimilar joints; high resistance to hot cracking

High resistance to high temperature oxidation (max. 1200°C) and carburization

Good impact toughness at low temperatures (down to -196°C), suitable for 9% Ni steel

Welding positions



Current type

DC electr. +

Approvals

CTL	TÜV
+	+

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Ni	Cr	Mo	Nb	Fe
0.03	0.5	0.35	62	22	9	3.4	2

Mechanical properties, 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 A5.11-97	not required	min. 760	min. 30	not required
ISO 14172-02	min. 420	760	min. 27	not required
Typical values	AW	510	44	92

Packaging, available sizes and identification

Diameter (mm)	2.5	3.2	4.0	
Length (mm)	300	300	350	
Unit: PE tube	Pieces / unit	94	61	45
	Net weight/unit (kg)	1.6	1.7	2.1

Identification Imprint: NiCrMo-3 / NiCro60/20 Tip colour: green

NiCro 60/20: rev. EN 15

Materials to be welded

Material type	BS 1501 3076	DIN 17744/17465 SEW 595/680	W.Nr.	ASTM / ACI	UNS
NiCrMo-steel type 625 and welding dissimilar high NiCrMo-steels for corrosion and heat resistant applications	NA 15	X10NiCrAlTi32 20	1.4876	Alloy800/800H	N08800/10
		NiCr22Mo	2.4605		
	NA 14	NiCr15Fe	2.4816	B168-Alloy 600	N06600
		NiCr22Mo9Nb	2.4856	B443-Alloy 625	N06625
	NA 16	NiCr21Mo	2.4858	B424-Alloy 825	N08825
		X1NiCrMoCuN25 20 6	1.4529		
		NiCr20Ti	2.4951	Alloy 75	N06075
		NiCr20TiA1	2.4952	Alloy 80A	N07080
		NiCr20CuMo	2.4660	Alloy 20	N08020
		X1NiCrMoCu25 20 5	1.4539		
		X2NiCrAlTi32 20	1.4558	Alloy 800L	N08800
		G-X10NiCrNb32 20	1.4859		
		X1CrNiMoCuN20 18 7	1.4547	254 SMO	S31254
	Low alloyed steel		12Ni9	1.5680	A333-5%Ni
		GS-10Ni19	1.5681	5%Ni cast	
		G-X8Ni9	1.5662	A353-9%Ni cast	K81340

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 - 70	DC+	44	80	0.95	17.2	87	1.51
3.2 x 300	70 - 100	DC+	44	101	1.5	26.8	55	1.48
4.0 x 350	100 - 130	DC+	53	215	2.2	46.4	30	1.41

* stub end 35 mm

Welding parameters, optimum fill passes

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

Application advice

Welding with heat input max. 1.5 kJ/mm

Interpass temperature max. 150°C