

## Ni-base electrode

### Classification

AWS A5.11M-97 : ENiCu-7  
 ISO 14172-03 : E Ni 4060 (NiCu30Mn3Ti)

### General description

Basic all position electrode for welding CuNi and NiCu-alloys  
 High resistance to seawater corrosion (not stagnant)  
 Applicable for welding NiCu-alloys to mild and low alloyed steel  
 Very suitable for welding salt fabrication components  
 Excellent weldability and slag release

### Welding positions



### Current type

DC electr. +

### Approvals

CTL	TÜV
+	+

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

C	Mn	Si	Ni	Cu	Fe	Ti
0.03	3.0	0.4	bal.	30	1.75	0.35

### Mechanical properties, all weld metal

Condition	0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J) -196°C
Required: AWS A5.11M-97	not required	min. 480	min. 30	not required
ISO 14172-02	min. 200	min. 480	min. 27	not required
Typical values	AW	300	485	110

### Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	300	350	350
Unit: PE tube	Pieces / unit	105	61	45
	Net weight/unit (kg)	1.7	1.9	2.1

Identification Imprint: Ni-Cu-7 / NiCu70/30 Tip colour: black

NiCu 70/30: rev. EN 15

# NiCu 70/30

## Materials to be welded

Material type	BS3076	DIN 17743	W.Nr.	ASTM/ACI	UNS
	NA 13	NiCu30Fe	2.4360	Monel 400	N04400
		G-NiCu30Nb	2.4365		
	NA 18	NiCu30Al	2.4375	Monel K500	N05500

The NiCu 70/30 is also applicable for welding carbon steels to CuNi and NiCu alloys

## 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+	50	72	0.80	20.7	90	1.85
3.2 x 350	70 - 90	DC+	65	129	1.2	32.5	46	1.49
4.0 x 350	90 - 130	DC+	67	245	1.75	47.17	31	1.51

\* 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	65	60	65	55	55	55
3.2	90	85	90	75	75	75
4.0						

## Application advice

Welding with heat input max. 1.5 kJ/mm  
Interpass temperature max. 150°C