

PRODUCT DATA SHEET

Metrode TIG CuNi Metrode TIG 90CuNi

Metrode TIG CuNi is a solid 70% copper-30% nickel filler wire for welding base material 70/30 and Metrode TIG 90CuNi is a 90% copper-10% nickel for welding 90/10 copper-nickel alloys. These consumables deposit a copper-nickel weld metal; Metrode TIG CuNi solid wire nominally deposits 67% copper and 30% nickel, whereas the Metrode TIG 90CuNi solid wire nominally deposits 86% copper and 10,5% nickel. The Metrode TIG CuNi solid wires match the 70/30 base materials for strength and colour and overmatch the 90/10

alloys for strength. The consumables are suitable for surfacing and cladding provided the need for an appropriate buttering layer is addressed, normally either Afrox TIG NiCu-7 or Afrox TIG Ni-1.

Applications

Applications include offshore construction, desalination plant, evaporators, condensers, etc. in salt, and seawater processing systems.

Materials to be Welded		
	70/30	90/10
ASTM	C71500 C96400 (cast)	C70600 C96200 (cast)
DIN	2,0882 2,0883	2,0872
BS	CN106 CN107 CN108	CN102
CDA	CA715	CA706
Proprietary	Kunifer 30 (IMI) Cunifer 30 (Krupp VDM)	Kunifer 10 (IMI) Cunifer 10 (Krupp VDM)

Classifications		
CuNi		
AWS	A5.7	ERCuNi
DIN	1733	SG-CuNi30Fe (2.0837)
BS	2901Pt3	C18
UNS		C71581
EN	24373	Cu7158 CuNi30MnI FeTi

Classifications		
90CuNi		
AWS		-
DIN	1733	SG-CuNi10Fe (20873)
BS	2901Pt3	(C16)
UNS		-
EN	24373	Cu7061 CuNi10

Typical Chemical Analysis (Wire analysis metal)					
	CuNi	90CuNi		CuNi	90CuNi
% Copper	Bal.	Bal.	% Lead	0,007 max	0,007 max
% Aluminium	0,03 max	0,03 max	% Iron	0,4 - 0,75	1,0 - 2,0*
% Silicon	0,01 max	0,01 max	% Phosphorous	0,01 max	0,01 max
% Manganese	0,5 - 1,0	0,5 - 1,0	% Titanium	0,2 - 0,5	0,2 - 0,5
% Nickel	30,0 - 32,0	10,0 - 11,0	% Carbon	0,05 max	0,05 max
% Sulphur	0,01 max	0,01 max	* BS range Fe = 1,5 - 1,8%		

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Typical Mechanical Properties (All weld metal in the as welded condition)

	CuNi	90CuNi
0,2% Proof Stress	200 MPa	200 MPa
Tensile Strength	365 MPa	365 MPa
% Elongation on 5d	40	40
Hardness	105 HV	105 HV

Packing Data Metrode TIG CuNi

Diameter (mm)	Consumable Length (mm)	Pack Mass (kg)	Item Number
1,6	1 000	2,5 (tube)	W077579
2,4	1 000	2,5 (tube)	W077580

Packing Data Metrode TIG 90CuNi

Diameter (mm)	Consumable Length (mm)	Pack Mass (kg)	Item Number
2,4	1 000	2,5 (tube)	W077722

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