



DAIKOWM 413



COPPER ALLOYS
CuNi 70-30

DESCRIPTION

70/30 copper-nickel solid wire

The weld metal of this wire rod is designed to match the CuNi 70/30 alloys and is nominally 67% Cu and 30% Ni. The consumable is suitable for surfacing and cladding provided buffer layer is made (normally buttering is made with alloy 400 or pure nickel). Applications include offshore construction, desalination plant, evaporators, condenser, etc, in salt and sea water processing system.

SPECIFICATIONS

ISO 24373	S Cu 7158 / CuNi30Mn1FeTi	AWS A5.7	ERCuNi
DIN 1733	SG-CuNi30Fe	Werkstoff Number	-
Certifications	-	Shielding	I1, I3
Positions	PA, PB, PC, PD, PE, PF, PG	Current	DC+

ASME QUALIFICATIONS

F-No (QW432)	34
A-No (QW442)	-

FERRITE

Ferrite	-
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PREN

PREN	-
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HARDNESS

Hardness	80HV - 110HV
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CHEM. COMP. %

	DEFAULT
Mn	0.8
Ni	31
P	0.003
S	0.005
Si	0.01
Fe	0.5
Ti	0.3
Pb	0.001

MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength R_m MPa	345	400
Yield strength $R_{p0.2}$ MPa	-	200
Elongation A ($L_0=5d_0$) %	0	38
Impact Charpy ISO-V	-	200J @ 20°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

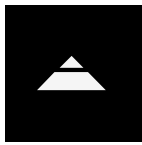
	1 mm	1.2 mm
Ampere	130A - 200A	185A - 245A
Voltage	24V - 28V	26V - 30V
Packaging	Ø 0,8÷1,6mm	Ø 0,8÷1,6mm
Packaging Type	Drums, B300, D200 and D100 spools.	Drums, B300, D200 and D100 spools.

V 01/2024



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.





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APPLICATION

Suitable for surfacing and cladding, provided there is an appropriate buttering layer, typically either alloy 400 or pure nickel. The 70/30 consumables are applicable for welding 70/30, 80/20, and 90/10 base materials. Matching the strength and color of the 70/30 base materials, they also exhibit overmatching strength compared to the 90/10 alloys. Applications include offshore construction, desalination plants, evaporators, condensers, etc., in salt and seawater processing systems. Preheating is not usually required, with a maximum interpass temperature of 150°C and no post-weld heat treatment (PWHT). It's crucial to meticulously avoid any contamination of the weld zone with foreign materials, especially sources of lead, tin, or zinc, to prevent weld metal cracking.

ALLOY TYPE

70/30 copper-nickel alloys.

MICROSTRUCTURE

Solid solution, single phase alloy.

MATERIALS

EN W.Nr.: 2.0872 (CuNi10Fe), 2.0882 (CuNi30Mn1Fe), 2.0883 (CuNi30Fe2Mn2).

ASTM: C71500, C96400 (cast).

UNS: C71500, C96400, C70600, C96200.

PROPRIETARY: Cunifer 30 (VDM), Cunifer 10 (VDM), Osna®-30 (KME), Osna®-10 (KME).

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