



# DAIKOWM 412



COPPER ALLOYS  
CuNi 90-10

## DESCRIPTION

90/10 copper-nickel solid wire

The weld metal of this wire rod is designed to match the CuNi 90/10 alloys and is nominally 86% Cu and 10,5% Ni. Applications include offshore construction, desalination plant, evaporators, condenser, etc, in salt and sea water processing system.

## SPECIFICATIONS

ISO 24373	S Cu 7061	AWS A5.7	ERCuNi
DIN 1733	SG-CuNi10Fe	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

-

## PREN

-

## HARDNESS

80HV - 110HV

## CHEM. COMP. %

### DEFAULT

Mn	0.8
Ni	10
P	0.003
S	0.005
Si	0.01
Fe	1.2
Ti	0.3
Pb	0.001

## MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength $R_m$ MPa	345	300
Yield strength $R_{p0.2}$ MPa	-	180
Elongation A ( $L_0=5d_0$ ) %	0	32
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](http://www.daikowelding.com).





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DESCRIPTION

COPPER ALLOYS

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## APPLICATION

Suited for surfacing and cladding applications, these consumables exhibit optimal performance when accompanied by a fitting buttering layer, commonly alloy 400 or pure nickel. Their versatile applications extend to offshore construction, desalination plants, and various components like evaporators and condensers used in salt and sea water processing systems. Notably, preheating is typically unnecessary, and the interpass temperature is restricted to a maximum of 150°C, eliminating the need for post-weld heat treatment (PWHT). Ensuring the weld zone's purity is paramount, necessitating meticulous precautions to prevent contamination with foreign materials, particularly those containing lead, tin, or zinc. Such scrupulous measures are imperative to safeguard against any potential weld metal cracking.

## ALLOY TYPE

90/10 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:** C70600, C96200.

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

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