



G-TECH 413

SMAW

COPPER ALLOYS

CuNi 70-30

DESCRIPTION

Special basic coated electrode, with alloyed core

Suitable for welding Cupronickel alloys (up to 30% Ni). The deposited metal has exceptional resistance to marine corrosion and shows good corrosion resistant fatigue. Therefore it is suitable also for joining and build-up welding in desalination plants, naval accessories, water treatment plants, heat exchangers and chemical industry equipments. Preheating is not necessary and avoid continuous welding, keep the interpass temperature under 100°C. The arc length should be short as possible and adopt straight bead method.

SPECIFICATIONS

ISO	-	AWS A5.6	ECuNi
DIN 1733	EL-CuNi30Fe	Werkstoff Number	-
Certifications	-	Shielding	-
Positions	PA, PB, PC, PD, PF	Current	DC+

ASME QUALIFICATIONS

F-No (QW432)	34	FERRITE	-	PREN	-	HARDNESS	90HB
A-No (QW442)	-						

CHEM. COMP. %

	DEFAULT	MECHANICAL PROPERTIES	MIN	VARIANT
Mn	1.3	Tensile strength R _m MPa	350	370
Ni	30	Yield strength R _{p0.2} MPa	-	230
Si	0.15	Elongation A (L ₀ =5d ₀) %	20	30
Fe	0.7	Impact Charpy ISO-V	-	-
		Impact Charpy ISO-V	-	-

WELDING PARAMETERS

	2.5 mm	3.2 mm	4 mm
Ampere	80A - 120A	100A - 140A	150A - 200A
Voltage	-	-	-
Packaging	pcs/kg	pcs/kg	pcs/kg
Packaging Type	Carton box	Carton box	Carton box

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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