



DAIKO 141

SMAW

NICKEL ALLOYS
Pure Nickel

DESCRIPTION

Pure nickel covered electrode

Electrode used for welding of pure nickel, cast iron, welding the clad side of nickel-clad steel and surfacing of steel wherever corrosion resistance in alkalis is required. The reaction of titanium with carbon in the weld metal holds free carbon to a low level so that the electrode can be used with low-carbon nickel (Nickel@200 and 201). The electrode is also suitable for dissimilar welding and various iron-base and nickel-base alloys. Excellent operability for groove and fillet welding in the down hand position.

SPECIFICATIONS

ISO 14172	E Ni 2061	AWS A5.11	ENi-1
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	-
Positions	PA, PB, PC, PD, PE, PF	Current	DC+

ASME QUALIFICATIONS

F-No (QW432)	41
A-No (QW442)	-

FERRITE

FERRITE	-
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PREN

PREN	-
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HARDNESS

HARDNESS	-
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CHEM. COMP. %

CHEM. COMP. %	DEFAULT
C	0.02
Mn	0.3
Ni	96.7
Al	0.03
P	0.01
S	0.01
Si	0.48
Cu	0.01
Fe	0.4
Ti	1.2

MECHANICAL PROPERTIES

MECHANICAL PROPERTIES	MIN	VARIANT
Tensile strength R_m MPa	410	430
Yield strength $R_{p0.2}$ MPa	200	280
Elongation A ($L_0=5d_0$) %	18	30
Impact Charpy ISO-V	-	130J @ 20°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

WELDING PARAMETERS	2.5 mm	3.2 mm	4 mm	
Ampere	50A - 80A	80A - 110A	110A - 150A	150A -
Voltage	-	-	-	-
Packaging	60 pcs/kg	29 pcs/kg	19 pcs/kg	13 p
Packaging Type	Carton box and tube.	Carton box and tube.	Carton box and tube.	Carton box and

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

Characterized by a composition of low-carbon pure nickel with a strategic addition of titanium for refinement and deoxidation, this filler metal excels in various welding applications. Its proficiency extends to joining pure nickel, creating buffer layers, and contributing to the cladding of joint faces and flanges. The solid wire variant stands out for its remarkable proficiency in welding cast iron, resulting in a soft deposit characterized by low strength. These consumables find utility in critical scenarios, benefiting tanks, vessels, process pipework, and heat exchangers. Chemical plants engaged in salt production, chlorination processes, and caustic soda evaporation particularly value their application. Additionally, their corrosion-resistant attributes make them indispensable for handling aggressive substances such as corrosive alkalis and halides. With an operational temperature range extending up to 150°C, these consumables demonstrate their mettle without necessitating post-weld heat treatment (PWHT).

ALLOY TYPE

Low carbon pure nickel weld metal with titanium de-oxidation.

MICROSTRUCTURE

In the as-welded condition the microstructure consists of almost pure nickel austenite. It is strongly ferromagnetic at room temperature.

MATERIALS

EN W.Nr.: 2.4066 (Ni 99.6), 2.4068(LC-Ni99), 2.4061 (LC Ni 99.6).

UNS: N02200, N02201.

PROPRIETARY: Nickel 200, 201 (Special Metals), Nickel 99.6, 99.2 (VDM).

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