

## DATA SHEET N. 1003

# DAIKO 112

## SMAW ELECTRODES

Description / Alloy type: Basic coated flux electrode for Nickel base 625 alloy

Specifications: **AWS A5.11** **EN ISO 14172 (num. / chem.)**  
ENiCrMo-3 ENi6625 / NiCr22Mo9Nb

Applications: It is designed to match the composition and properties of 625. This alloy is used for the high temperature strength and structural stability and is also used for its resistance to general corrosion, pitting, crevice and stress corrosion cracking in severe chloride media.

Useful proprieties from -269°C to above 1000°C are achieved.

It is used for welding of alloy 625, alloy 825, alloy 25-6MO, and a range of high alloy austenitic and super austenitic stainless steels. It is also used for surfacing of steel, for welding 9% Ni steels, and for welding various corrosion-resistant alloys such as alloy 20.

Applications include furnace equipment, petrochemical and power generation plants and also overlays on pumps, valves and shafts in offshore and marine environments where high pitting resistance (PRE = 50) is essential. Widely used in oil & gas production and process.

Materials to be welded:

### **Matching Alloy 625**

ASTM: UNS N06625; A494 CW-6MC (cast);

DIN: 2.4856;

Proprietary Alloy: Inconel™ 625; Nicrofer™ 6020hMo e 6022hMo.

### **Other alloys**

High Nickel Alloys: Inconel 601, Incoloy 800H Incoloy 825;

Superaustenitics: UNS S31254, 254SMO; 904L.

Cryogenic: 9% Ni steels.

Composition:  
(weight %)

	C	Mn	Fe	S	P	Si	Cu	Ni	Cr	Nb+Ta	Mo
Min	-	-	-	-	-	-	-	55	20.0	3.15	8.0
Max	0.10	1.0	2.5	0.015	0.020	0.75	0.50	Bal.	23.0	4.15	10.0
Typ	0.04	0.01	0.2	0.005	0.010	0.35	0.01	65	21.5	3.50	9.0

Welding positions:



Current (DC+):

d. 2.5mm **40-65A**; d. 3.2mm **65-90A**; d. 4.0mm **90-125A**; d. 4.8mm **125-160A**;

All-weld proprieties:

As welded	Min.	Typical
Tensile strength [MPa]	730	800
0.2% proof stress [MPa]	420	480
Elongation 4d [%]	30	35
Impact Energy -196°C [J]	-	30

Complementary products:

MIG, TIG wire,, SAW wire and flux, FCAW wire, STRIP and ESW flux.