

AFROX NIMROD 625KS



Afrox Nimrod 625KS is a MMA electrode with a basic flux system made on a 625 core wire. The electrode is designed to combine easy operation with the deposition of high quality, radiographically sound weld metal and a finished bead of good appearance. **Nimrod 625KS** is optimised for DC+ welding in all positions including pipework qualified in the ASME 6G position. Recovery is about 120% with respect to core wire, 65% with respect to whole electrode. These consumables are designed to match the composition and

properties of alloy 625. Originally developed to give high temperature strength and structural stability, alloy 625 is also widely used for its resistance to general corrosion, pitting, crevice and stress corrosion cracking in severe chloride media. These properties are conferred by high levels of chromium, molybdenum and niobium, which also raise strength to the highest amongst standard nickel-base alloys. Useful properties from - 269°C to above 1000°C are achieved.

APPLICATIONS

In addition to matching alloy 625, suitable for welding **heat resisting** alloys including Inconel 601 (except severe sulphidising conditions), Incoloy 800/800H (preferred to **Nimrod AKS** above about 900°C), or combinations of these with other alloys for **furnace equipment, petrochemical and power generation** plants. Some other applications include: Overmatching corrosion-resistant welds in alloy 825, Hastelloys

G and G3, alloy 28, 904L, 6% Mo superaustenitic stainless 254SMo, and also **overlays** on **pumps, valves and shafts**, often in **offshore** and **marine** environments where high pitting resistance (PRE = 50) and tolerance to weld metal dilution are essential. Welds in **high strength** ferrous alloys including **cryogenic** 9% nickel steels and for reclamation of dies where rapid **work-hardening** and **toughness** are required.

MATERIALS TO BE WELDED

Matching Alloy 625

ASTM-ASME	DIN	BS
UNS N06625	2.4856	NA21
A494 CW-6MC (cast)		

Proprietary Alloys

Inconel 625 (Inco)
Nicrofer 6020hMo (VDM)
Nicrofer 6022hMo (VDM)

Other Alloys

High Nickel Alloys:	Superaustenitic alloys:
Inconel 601 (Inco)	UNS S31254
Incoloy 800H (Inc)	254SMO (Avesta)
Incoloy 825 (Inco)	904L
And equivalents	Similar alloys

Cryogenic: Dissimilar:
9%Ni steels Combinations of above

CLASSIFICATIONS

AWS	A5.11	ENiCrMo-3
BS	EN (proposed)	ENi6625
DIN	1736	EL-NiCr20Mo9Nb (2.4621)

**CHEMICAL ANALYSIS
(ALL WELD METAL)**

% Carbon	0.03 max	% Nickel	55.0 min
% Manganese	0.5-1.0	% Molybdenum	8.0-10.0
% Silicon	0.75 max	% Niobium	3.15-4.15
% Sulphur	0.015 max	% Iron	2.5 max
% Phosphorus	0.02 max	% Copper	0.50 max
% Chrome	20.0-23.0		

The information contained or otherwise referenced herein is presented only as typical without guarantee or warranty, and Afrox expressly disclaims any liability incurred from any reliance thereon. No data is to be construed as recommended for any welding condition or technique not controlled by Afrox.

For more information contact the Afrox Customer Service Centre,
tel: 0860 020202 or e-mail: customer.service@afrox.boc.com
Website: www.afrox.com

AFROX NIMROD 625KS

TYPICAL MECHANICAL PROPERTIES (ALL WELD METAL IN THE AS WELDED CONDITION)

0.2% Proof Stress	500 MPa	% Reduction of area	40
Tensile Strength	800 MPa	Impact energy at -196°C	60J
% Elongation on 4d	40	Hardness (as welded)	250HV
% Elongation on 5d	38	Hardness (work-hardened)	450HV

PACKING DATA AND OPERATING CURRENT

(DC+)

Diameter mm	Electrode Length mm	Current Amps	Item Number	Pack Mass Kg
2,5	260	60-80	077/635	3,7

STORAGE AND RE-BAKING

Hermetically sealed ring-pull metal tin with unlimited shelf life. Direct use from tin is satisfactory for longer than a working shift of 8h. Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.

For electrodes that have been exposed:

Redry 200 – 250°C/1-2h to restore to as-packed condition. Maximum 350° C, 3 cycles, 10h total.

Storage of redried electrodes at 50 – 200°C in holding oven or heated quiver: no limit, but maximum 6 weeks recommended. Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

The information contained or otherwise referenced herein is presented only as typical without guarantee or warranty, and Afrox expressly disclaims any liability incurred from any reliance thereon. No data is to be construed as recommended for any welding condition or technique not controlled by Afrox.