

PRODUCT DATA SHEET

Afrox Subarc NiCrMo-3

Afrox Subarc NiCrMo-3 is a submerged arc welding wire and is designed to match the composition and properties of alloy 625. These properties are conferred by high levels of chromium, molybdenum and niobium, which also raise strength to the highest amongst standard nickel-based alloys. Useful properties from -196°C to above 1 000°C are achieved.

Applications

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. Recommended flux: Metrode NiCr Flux (Item Number W077702)

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	Super Austenitic Alloys
Inconel® 601 (Inco)	UNS S31254
Incoloy® 800H (Inco)	254 SMO® (Avesta)
Incoloy® 825	904L (Inco)
And equivalents	Similar alloys
Cryogenic	Dissimilar
9% Ni steels	Combinations of above

Classifications

AWS	A5.14	ERNiCrMo-3
EN	18274	ENi6625 (NiCr22Mo9Nb)

Typical Chemical Analysis (All weld metal)

% Carbon	0,05 max	% Titanium	0,4 max
% Manganese	0,5 max	% Niobium	3,15 - 4,15
% Silicon	0,5 max	% Iron	1,0 max
% Sulphur	0,015 max	% Copper	0,5 max
% Phosphorous	0,015 max	% Aluminium	0,4 max
% Chrome	20,0 - 23,0	% Molybdenum	8,0 - 10,0
% Nickel	60,0 min		

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Typical Mechanical Properties (All weld metal in the as welded condition)

0,2% Proof Stress	430 MPa
Tensile Strength	715 MPa
% Elongation on 4d	50
% Elongation on 5d	47
Impact Energy at -196°C	100 J
Hardness cap/mid	235/255 HV

Packing Data

SAW

Diameter (mm)	Pack Mass (kg)	Item Number
2,4	25,0	W077639
3,2	25,0	W077640

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