



ES Clad NiB1

Flux for
ES Strip Cladding

Classification

EN 760: (ES) A FB 2 DC

Characteristics

Neutral agglomerated highly basic flux for Electro Slag (ESW) strip cladding in combination with Nickel base strips (Ni-Cr, Ni-Cu and Ni-Cr-Mo alloys). This flux gives an excellent slag removal combined with a smooth and even bead finish even at high speed. Its special characteristics the hydrogen level is low to assure its suitability for overlays on heat resistant Cr/Mo-steels

Applications

ES Clad NiB1 can be used for cladding and surfacing of chemical plant components and equipments in the nuclear / offshore fields to obtain high NiCr(Mo), Ni-Cu-overlays such as Alloy 600®, Alloy 625® and similar Alloys (Alloy 59®, C276®). Depending on the particular specifications and in combination with appropriate strip electrodes according to ASME II C SFA-5.14 or EN ISO 18274 constant weld overlays with low dilution rates are achieved in single- or multi layers. Strip dimensions from 30x0.5 to 60x0.5 mm can be applied.

Typical Flux Composition (%)

CaO+ MgO	CaF ₂	SiO ₂ + Al ₂ O ₃ +TiO ₂	Basicity Index (Boniszewski)
4	72	22	~4.70

Other Properties

Density (Kg/dm ³ (l))	Grain Size Acc. to ISO 14174	Current Carrying Capacity	Flux Consumption
1.0-1.1	2-16 (Tyler 10 x 65)	1500 A DC using one strip electrode 60 x 0.5 mm	~0.7 kg / kg Strip

Parameters

Strip (mm)	Polarity	Current (A)	Voltage (V)	Travel Speed (cm/min)
30 X 0.50	DC +	750 - 1000	23 - 26	14 – 24
60 X 0.50	DC +	1100 - 1500	24 - 28	14 – 24

Packing & Storage

25 kg or others. The flux can be stored and used up to 3 years after delivery, subject to maintain the storage conditions. Flux that has picked up moisture has to be rebaked at ~ 300-350°C for ~ 4hrs before use.

This flux is also available in 5kg **Ready to Use (RTU)** bag on request. This **RTU flux** to be consumed within 4hrs from the opening of the bag without baking.

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