



Stainflux

Root protector for welding of low-alloyed and stainless steels with <25% Ni.



The flux is applied to root side before welding and protects against oxidation, which occurs during welding. Stainflux is specially developed for use in connection with GTAW-welding of low-alloy and stainless steel with a maximum 25% nickel content but can also be used with other methods.

Areas of Use

Spot welding:

Stainflux is applied to the surfaces of the joint before assembling. It works as a cleansing agent prevents the formation of tempering oxides in the vicinity of the spot welds. This process eliminates the risk of contaminating the weld joint and allows the spot weld to melt easily during the subsequent welding.

As a protective layer during welding:

Stainflux has several important functions when applied to the weld. The weld is protected against oxidation. The weld bead can be laid with a higher and constant speed. The flux's moistening and supporting effects on the melt redirects the surplus heat from the local areas in the weld and thereby prevents uncontrolled penetrations and burn-through. Pinholes are prevented by even, uniform heating and the absence of contaminants.

Overlapping welds:

Stainflux applied to the underside of overlaps prevents uncontrolled penetrations. Even heating and lower cooling speed prevents brittleness and gives stronger, more ductile welds.

Single-V-joints with different plate thickness:

Stainflux prevents burn-through when welding together thin and thick materials. Because the heat is evenly distributed local areas of high temperature are avoided and the welds penetrate uniformly.

Single-V-joints welded on one side:

Stainflux applied to the weld promotes even penetration with sufficient amount of material with initial bonding. Welds which previously needed welding from both sides can be effectively joined with a weld bead on one side.

Single-V-joints welded on both sides:

When joining thick plate, or where two-sided welding is necessary for quality's sake, the flux should be applied to the weld before the first weld bead is laid. The even and strongly bound weld does not require chiselling or grinding. Brushing with a steel brush is recommended for removing slag remnants after the second weld bead.

Joining of low and high-alloy steel (composite steel):

When Stainflux is used the welder can bevel both the low-alloyed and the high-alloyed material prior to welding. This eliminates supplementary work with grinding and chiselling. When the flux is used with these alloys it should be applied to the high-alloyed side and welded beginning with the low-alloyed side.

Characteristics

Stainflux root-protector is delivered in powder form, which is mixed with denatured ethanol before welding. The distinguishing quality of the flux is its ability to eliminate oxide inclusions and the formation of tempering oxides during welding. Stainflux replaces* protective gas (especially where the construction obstructs the use of protective gas on root side), tape and ceramic backing. Stainflux works also as weld support by distributing the heat evenly underneath the weld. Furthermore it acts chemically by effectively cleansing the melt of contaminants.

Advantages

- Replaces* root gas and backing bar
- Prevents oxide inclusions
- Protects the root side from oxidation
- Gives an even smooth bead
- Eliminate pore formation
- Prevents burn-through

Technical data

Product name	Stainflux
Appearance:	Fine powder
Colour:	Grey
Odour:	Odourless
Solubility in water	Slightly soluble
pH:	10
Weight:	0.5 kg

Ordering information

Product name	Art.nr
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Stain flux should not be seen as a substitute for protective gas in all applications. Testing according to ASTM G48 revealed the following technical data:

Loss of weight with argon-protection = 100%

(100%=the loss of weight which occurs with argon-protection)

Loss of weight with Stainflux = 180%

(much better than without root-protection but not as good as argon-protection)

Loss of weight without any protection = 318%



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