KRYSTAL ECO 1

 Product data sheet

 N°
 621

 Rev.
 02

 Data
 27/10/2023

Covering and drossing-off granular flux for Aluminium alloys





Product physical data

Granule size: Specific gravity: 1 mm up to 5 mm 1,1-1,2 g/cm³

- Granular form for a dust free
 environment
- Flux not classified as dangerous for use and transport

Off white

- No presence of irritant compounds
- Low dosage required

colour.	OII-WIIILE
Metal temperature range:	660-760°C

Description

KRYSTAL ECO 1 is consisting in a blend of inorganic and natural salts to provide covering and drossing-off action over the liquid, supplied in granules, suitable for treating molten aluminium alloys in crucible and reverberatory furnaces or transport ladles.

The product is not recommended for alloys containing more than 3% Magnesium or hypereutectic Al-Si alloys when a sodium-calcium free flux is proposed (Crystal 2026)

Method of use

1. In open flame or tower melting furnaces

In these type of furnace, liquid metal is exposed to persistent oxidizing conditions, therefore it is advisable to cover the melt with a flux which prevent oxidation. Due to contact with hot furnace chamber atmosphere the surface of liquid metal generates a layer of aluminium oxides soon transforming into Corundum. *KRYSTAL* ECO 1 can be added manually or by a dosing/injector system over or below the melt surface to stop oxidation and reduce dross into a fine powdery dross free from aluminium.

Treatment with *KRYSTAL* ECO 1 drastically reduces metal content of the dross and separates oxides formations. The oxides build-up on the walls is the main cause of hard-spots and leads to a reduction in furnace capacity.

KRYSTAL ECO 1 when added in direct contact with the floating dross must be heated up and gently stir the flux within the dross to promote a good reaction. After mixing the flux within the dross and when the dross has become dry, transfer the metal into ladle.

2. In crucible furnaces

Colours

In crucible furnaces, even if there is no flame in contact with the metal, it is recommended to follow the same treatment described in (1). This will result in a dross with low metal content and in a reduction of oxide build-up on the crucible walls. By regularly cleaning crucible walls , thermal conductivity remain constant and crucible service life increased

3. In transport ladles and/or with degassing rotors

KRYSTAL ECO 1 is suitable for melt cleaning inside transfer ladles. The cleaning action starts to take place after sprinkling the flux on top of the dross. After few moments necessary to initiate the reaction, mix flux into the surface layer of dross

A gentle exothermic reaction will re-heat dross and release combined metal. The dross, now dry and powdery, will have entrapped oxides which can be removed by a suitable dross skimmer.

The flux can also be added during degassing operation following the instruction and dosing method suggested in the degassing machine (DUAL SEF – DUAL 2) Dosage: usual amount of *KRYSTAL ECO* 1 flux to be added is 50-100 g for 100 kg of metal

Packaging and storage

25 kg recycled paper bag laminated with polythene, moisture resistant

Warnings: The product is hygroscopic. Store in a dry storage and away from heat sources. Close the package after use. If stored properly the product has a shelf life exceeding 24 months



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