

# STRUVITE FROM WASTE WATER BY "CANAL DE ISABEL II S.A." PROCESS



*Keywords: • biofertilizer • slow release • phosphorous • nitrogen*

## Key facts:

- **Product Category:** PFC (Product Function Category) as of EC Fertilizers Regulation revision COM (2016) 157
- **Input material:** wastewater,  $MgCl_2$  and NaOH
- **General appearance:** granular and spherical product (several grain sizes).
- **Nutrient Content (N-P-K %):** 5/28/0
- **Product status:** Replicated commercial product
- **Limitation of application:** In the absence of approval of the framework for the new facultative European regulation on fertilising products. In many countries, struvite cannot currently be used as a biofertilizer, as it is classified as waste.
- **Permit availability:** So far, the product is accepted as a fertilizer in the UK and the Netherlands.
- **Geographical area:** EU28
- **Price range:** N/A



## Summary:

Crystal Green is a pure granular phosphorus fertilizer (99.6%) with the following virtues:

- It is the only fertilizer recovered with different marketable sizes (granulometries).
- Complies with EU Fertilizer Regulations.
- Registered under REACH.
- Presents the lowest salt index of any phosphorus source.
- Has a hardness similar to MAP or DAP.
- Easy to operate.
- It is slow release and therefore prepares the soil to improve uptake.
- Complements traditional phosphates.

In terms of environmental benefits:

- It is sustainable, of local origin and is obtained from the recovery of nutrients.
- Proven to reduce leaching.
- Helps protect sensitive waterways.

## How to use:

- **Type of farming:** conventional
- **Cultivation methods:** open field or greenhouse
- **Recommended crops:** permanent grassland, cereals for the production of grain, root crops and plants harvested green from arable land by area
- **Application doses:** 0.100 t/ha

## Contact

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### Key product features:

- Mineral salt.
- Slow release fertilizer.
- 99.6% purity.
- Granular presentation. Available in Size Guide Number (SGN) 90, 150 and 300 custom sized for the agriculture and turf industries.
- High phosphorus content product.

### Key product benefits:

- Cheaper than conventional phosphorus removal methods.
- Reduces the costs of managing livestock waste.
- Low salt index.
- Denser root mass.
- Faster recovery.
- Increased stress tolerance.
- Reduced application rates and labor costs.
- Reduced risk of runoff and leaching.
- Uncoated, continuous-release granule is not temperature-dependent.
- Dust-free crystalline granule.

### Competitive position and advantages:

Why this product is best for solving nutrient recovery problems?

Ostara turns nuisance struvite into a premium, market-ready, fertilizer sold as Crystal Green<sup>®</sup>, closing the loop on the phosphorus cycle while at the same time providing communities with a local source of eco-friendly phosphorus fertilizer.

Crystal Green's composition will not leach and run off into local waterways, and is proven to significantly reduce non-point source pollution, further protecting precious ecosystems from the effects of nutrient pollution.

Crystal Green<sup>®</sup> helps grow turf more sustainably, with faster recovery time, improved stand and color, and reduced leaching and runoff. Promotes vibrant turf that withstands the stress and wear and tear of daily use for season-to-season health.

Crystal Green benefits crops with better phosphate control and uptake for higher yields. Crystal Green has shown a positive yield response across a wide variety of crops. Its citrate-soluble, plant-available release prevents soil tie-up for maximized efficiency. Proven to reduce nutrient runoff, it's not just good economics, it's sustainable agronomics.

