



**Crystal Green**<sup>®</sup>  
5-28-0 (16.7MgO)

# Turn Problematic Struvite Into Premium, High Value, Market-Ready Fertiliser

The true differentiator in the Ostara process; Crystal Green<sup>®</sup> is the only continuous release, Root-Activated<sup>™</sup> phosphorus fertiliser ready for commercial sale.

## RECOVERY FOR BENEFICIAL REUSE

*Created from sustainable phosphorus resources using Ostara's Pearl<sup>®</sup> process, Crystal Green is a true innovation in fertiliser technology.*

*Proven to reduce nutrient leaching, Crystal Green can significantly reduce surface run-off, reducing diffuse nutrient pollution.*



## How Crystal Green Works:

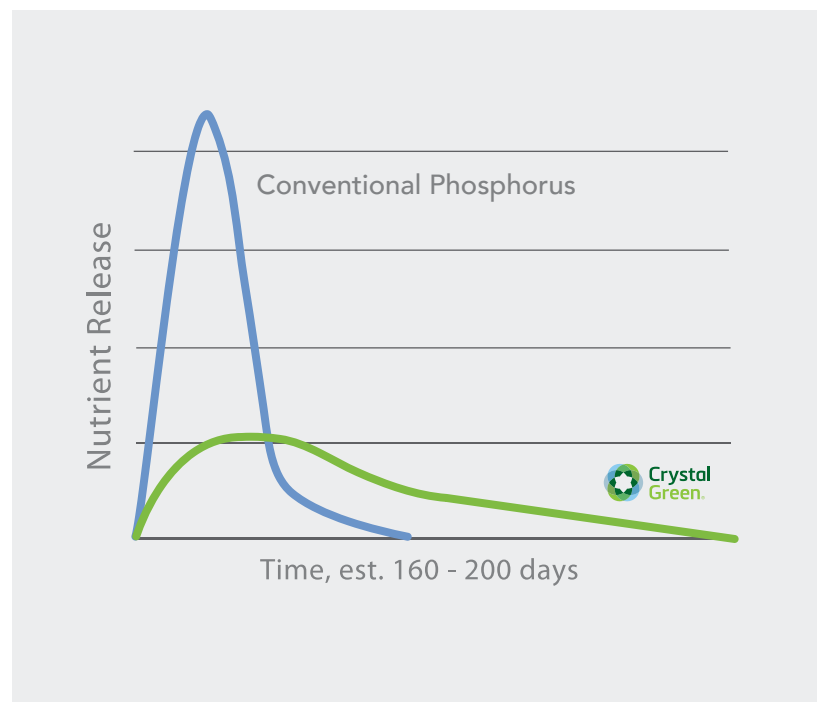
Root-Activated<sup>™</sup> Nutrient Technology

Crystal Green is the first high-grade commercial fertiliser with phosphorus, nitrogen and magnesium, to offer an alternative to conventional phosphorus sources. Conventional phosphorus fertilisers dissolve quickly into the soil. Plants, unable to absorb all the nutrients at once, typically leave 75% of fertiliser behind, increasing the risk of nutrient runoff.

Crystal Green's unique crystalline composition releases nutrients throughout the growing season. Activated by the organic acids plants release to help their roots absorb nutrients, Crystal Green's Root-Activated<sup>™</sup> response supplies growing plants with the food they need on-demand. When nutrient requirements are filled, Crystal Green stops releasing, minimising excess phosphorus in the soil and significantly reducing leaching.

## Nutrient Release Curve

Crystal Green vs. Conventional Phosphorus



## Market-Ready Sizes

Ostara's controlled crystallisation process creates four distinct sizes which are used in the turf, ornamental, horticulture, and agriculture markets. The granule size and shape allows Crystal Green to be used seamlessly in fertiliser blends; fitting into the existing machinery, as a direct alternative to traditional mined phosphate fertilisers.



## Features and Benefits

- ✓ Available in market-ready Size Guide Numbers (SGN): 90, 150, 300, 450
- ✓ Solution to combat diffuse nutrient pollution
- ✓ Ready for sale as a standalone product or in commercial blends
- ✓ Available in one tonne bulk bags
- ✓ Guaranteed revenue stream for wastewater treatment plants (WWTPs)

## Guaranteed Analysis

99.6% pure magnesium ammonium phosphate hexa-hydrate ( $MgNH_4PO_4 \cdot 6H_2O$ )

Phosphorus (P) .....12.6%  
 28% phosphorus pentoxide ( $P_2O_5$ )  
 Nitrogen (N).....5%  
 5% ammoniacal nitrogen ( $NH_3-N$ )  
 Magnesium (Mg) .....10%  
 16.7% magnesium oxide (MgO)

## Heavy Metal Concentrations (PPM)

Heavy Metal	EU Fertiliser Regulations <sup>1</sup>		CrystalGreen.
	Current	Proposed <sup>2</sup>	
Arsenic (As)	60	40	<2
Cadmium (Cd)	60	20 - 60 <sup>3</sup>	<2
Chromium – hexavalent (CrVI)	2	2	<0.1
Chromium – total (Cr)	N/A	100	<5
Copper (Cu)	N/A	600	<8
Lead (Pb)	150	120	<0.2
Mercury (Hg)	2	1	<0.1
Nickel (Ni)	120	100	<2
Zinc (Zn)	N/A	1,500	<2

<sup>1</sup> All values are mg/kg dry matter except Cd which is in mg/kg  $P_2O_5$   
<sup>2</sup> Current proposal under the new EU Fertiliser Regulations; subject to change  
<sup>3</sup> Proposed 60 mg/kg  $P_2O_5$  from the date that the regulations are implemented reducing to 40 mg/kg  $P_2O_5$  after three years and to 20 mg/kg  $P_2O_5$  twelve years after the regulations are implemented

## Salt Index

	DAP	MAP	TSP	Crystal Green.
Salt Index	29	27	10	7.7



**Ostara Nutrient Recovery Technologies, Inc.** helps protect precious water resources by changing the way cities around the world manage nutrients in wastewater streams. The company's Pearl® and WASSTRIP® technologies sustainably transforms phosphorus and nitrogen recovered from municipal and industrial water treatment facilities into a high-value, eco-friendly fertiliser, sold and marketed by Ostara as Crystal Green®. Crystal Green's unique Root-Activated™ mode-of-action minimises phosphorus tie-up in the soil, thus enhancing crop yield and performance, and significantly reducing nutrient leaching and runoff. For more information, visit [www.ostara.com](http://www.ostara.com) and [www.crystalgreen.com](http://www.crystalgreen.com)

Crystal Green complies with the requirements of the European Union (EU) fertiliser and REACH regulations and has attained End of Waste status in several EU jurisdictions.