



## Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 03.07.2019

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**Crystal Green**

### SECTION 1: Identification

#### Product identifier

**Product name:** Crystal Green

**Product code:** MgNH<sub>4</sub>PO<sub>4</sub>-6H<sub>2</sub>O

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Slow release fertilizer.

**Uses advised against:** None known.

**Reasons why uses advised against:** Not determined or not applicable.

#### Manufacturer or supplier details

##### Manufacturer:

##### Canada

Ostara Nutrient Recovery Technologies Inc.

Suite 690- 1199 West Pender St

Vancouver, BC V6E 2R1

604) 408-6697

abritton@ostara.com

#### Emergency telephone number:

##### Canada

CHEMTREC (24 hours)

North America: 1-800-424-9300

Canada: +1 703-527-3887 (CCN 849806)

For Chemical Emergencies (Spill, Leak, Fire or Accident)

### SECTION 2: Hazard identification

**GHS classification:** Not a hazardous substance or mixture

#### Label elements

**Hazard pictograms:** None

**Signal word:** None

**Hazard statements:** None

**Precautionary statements:** None

#### Hazards not otherwise classified:

Nuisance dust may cause irritation and/or mechanical abrasion of the eye, skin and respiratory tract

### SECTION 3: Composition/information on ingredients

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Identification	Name	Weight %
CAS number: 7785-21-9	Phosphoric acid, ammonium magnesium salt (1:1:1)	>97

**Additional Information:** None

## SECTION 4: First-aid measures

### Description of first-aid measures

#### General notes:

Not determined or not available.

#### After inhalation:

Loosen clothing as necessary and position individual in a comfortable position  
Maintain an unobstructed airway  
Take precautions to ensure your own safety  
Remove source of exposure or move person to fresh air  
Get medical advice if you feel unwell or concerned

#### After skin contact:

Rinse affected area with soap and water  
If symptoms develop or persist, seek medical attention  
Take off all contaminated clothing  
Gently blot or brush away excess product

#### After eye contact:

If symptoms develop or persist, seek medical attention  
Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open  
Remove contact lenses, if present and easy to do so  
Continue rinsing for 15-20 minutes

#### After ingestion:

Seek medical attention if irritation, discomfort, or vomiting persists  
If swallowed, rinse mouth with water (only if the person is conscious)

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Airborne dust may cause mechanical abrasion and irritation of the eye, skin and respiratory tract

#### Delayed symptoms and effects:

Not determined or not available.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not available.

#### Notes for the doctor:

Not determined or not available.

## SECTION 5: Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

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### Unsuitable extinguishing media:

Not determined or not applicable.

### Specific hazards during fire-fighting:

Toxic and irritating fumes may be produced in a fire, including: Nitrogen Oxides, Magnesium Oxides and Phosphorus Oxides

### Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

### Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

- Ensure adequate ventilation
- Ensure air handling systems are operational
- Ensure suitable personal protection during removal of spillages
- Avoid generation of dust
- Avoid breathing dust

### Environmental precautions:

- Should not be released into the environment
- Prevent from reaching drains, sewer or waterway

### Methods and material for containment and cleaning up:

- Wear protective eye wear, gloves and clothing
- Sweep or scoop up solid material while minimizing dust generation
- Sweep spilled substances into containers. If appropriate, moisten first to prevent dusting
- Use vacuum equipment for collecting spilt materials, where practical
- Dispose of contents / container in accordance with local regulations
- Transfer to a container for disposal

### Reference to other sections:

See also sections 8, 13

## SECTION 7: Handling and storage

### Precautions for safe handling:

- Use only with adequate ventilation.
- Avoid breathing dust.
- Do not eat, drink, smoke or use personal products when handling chemical substances.
- Wear suitable gloves.
- Wash hands thoroughly after handling.
- Wear recommended personal protective equipment (See Section 8).
- Or add eye protection and respiratory protection if exposure to airborne dust is possible

### Conditions for safe storage, including any incompatibilities:

- Keep container tightly sealed.
- Keep container dry.
- Store in a cool, well-ventilated area.
- Keep away from heat and direct sunlight.
- Store below 55°C.
- Store away from incompatible materials (See Section 10.)

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### SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

#### Occupational Exposure limit values:

No occupational exposure limits noted for the ingredient(s).

#### Biological limit values:

No biological exposure limits noted for the ingredient(s).

#### Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

#### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

#### Personal protection equipment

##### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

##### Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

##### Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

#### General hygienic measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance (physical state, color):</b>	Powder/Pellets (up to 5mmdiameter).
<b>Odor:</b>	Musty/Ammonia (when damp or heated above 55°C).
<b>Odor threshold:</b>	Not determined or not available.
<b>pH-value:</b>	Not determined or not available.
<b>Melting/Freezing point:</b>	Not determined or not available.
<b>Boiling point/range:</b>	Not determined or not available.
<b>Flash point:</b>	Not determined or not available.
<b>Evaporation rate:</b>	Not applicable
<b>Flammability (solid, gaseous):</b>	Not determined or not available.
<b>Explosion limit upper:</b>	Not determined or not available.

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<b>Explosion limit lower:</b>	Not determined or not available.
<b>Vapor pressure:</b>	Not determined or not available.
<b>Vapor density:</b>	Not determined or not available.
<b>Density:</b>	Not determined or not available.
<b>Relative density:</b>	1.7
<b>Solubilities:</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water):</b>	Not determined or not available.
<b>Auto/Self-ignition temperature:</b>	Not determined or not available.
<b>Decomposition temperature:</b>	>55°C
<b>Dynamic viscosity:</b>	Not applicable.
<b>Kinematic viscosity:</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

### Other information

<b>Bulk Density</b>	1 g/ml
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## SECTION 10: Stability and reactivity

### Reactivity:

Stable under normal conditions.

### Chemical stability:

Stable under normal conditions.

### Possibility of hazardous reactions:

Stable under normal conditions.

### Conditions to avoid:

Heat and direct sunlight.

### Incompatible materials:

Strong oxidizing agents.

### Hazardous decomposition products:

Nitrogen oxides, Magnesium oxides, Phosphorus oxides.

## SECTION 11: Toxicological information

### Acute toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Skin corrosion/irritation

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Serious eye damage/irritation

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

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No data available.

**Substance data:** No data available.

### Respiratory or skin sensitization

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**International Agency for Research on Cancer (IARC):** None of the ingredients are listed.

**National Toxicology Program (NTP):** None of the ingredients are listed.

### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Reproductive toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Specific target organ toxicity (single exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Specific target organ toxicity (repeated exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

No data available.

**Substance data:** No data available.

### Information on likely routes of exposure:

No data available.

### Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

### Other information:

No data available.

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## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

Fish	Low toxicity to aquatic organisms.
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**Substance data:** No data available.

### Chronic (long-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:**

Fish	Low toxicity to aquatic organisms.
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**Substance data:** No data available.

### Persistence and degradability

**Product data:**

There is evidence of degradation in soil. Not persistent.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:**

This substance has no potential for bioaccumulation.

**Substance data:** No data available.

### Mobility in soil

**Product data:**

Insoluble in water. The substance is predicted to have low mobility in soil.

**Substance data:** No data available.

**Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

## SECTION 14: Transport information

### Canadian Transportation of Dangerous Goods (TDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

### International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
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<b>UN proper shipping name</b>	Not regulated
<b>UN transport hazard class(es)</b>	None
<b>Packing group</b>	None
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

## International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

<b>UN number</b>	Not regulated
<b>UN proper shipping name</b>	Not regulated
<b>UN transport hazard class(es)</b>	None
<b>Packing group</b>	None
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

## SECTION 15: Regulatory information

### Canada regulations

**Domestic substances list (DSL):** None of the ingredients are listed.

**Non-domestic substances list (NDSL):**

7785-21-9	Phosphoric acid, ammonium magnesium salt (1:1:1)	Listed
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## SECTION 16: Other information

**Abbreviations and Acronyms:** None

### Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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**End of Safety Data Sheet**