

Safety Data Sheet

Optimum Plus 16-0-15

SECTION 1. IDENTIFICATION

Product Identifier	Optimum Plus 16-0-15
Other Means of Identification	12130
Product Family	Optimum Plus
Recommended Use	Water Soluble Fertilizer for Plants.
Manufacturer/Supplier Identifier	Master Plant-Prod Inc., 314 Orenda Rd. , Brampton, Ontario, Canada, L6T 1G1, Canada
Supplier Identifier	Griffin Greenhouse Supplies Inc., 1619 Main St. , Tewksbury, MA, 01876, USA, 1-800-888-0054, https://www.griffins.com/
Emergency Phone No.	CANUTEC, 1-888-226-8832 (North America) or 1-613-996-6666 (International), 24 Hours

SECTION 2. HAZARD IDENTIFICATION

Classified according to the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Serious eye damage - Category 1; Reproductive toxicity - Category 1

Label Elements



Signal Word:

Danger

Hazard Statement(s):

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child.

Precautionary Statement(s):

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P264 Wash hands and skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTRE or doctor.

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P330 Rinse mouth.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Nitric acid, ammonium calcium salt	15245-12-2	58		calcium ammonium nitrate
Boric acid	10043-35-3	<0.15		

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Get medical advice or attention if you feel unwell or are concerned. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice or attention.

Ingestion

Immediately call a Poison Centre or doctor.

Most Important Symptoms and Effects, Acute and Delayed

May cause mild irritation.

Immediate Medical Attention and Special Treatment

Special Instructions

See first aid information above. Note to Physicians: Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use flooding quantities of water spray or fog.

Unsuitable Extinguishing Media

DO NOT use water jet.

Specific Hazards Arising from the Product

Does not burn. Mild oxidizer. May intensify fire.

In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides; corrosive sulfur oxides; potassium oxides; calcium oxides; metal oxides.

Special Protective Equipment and Precautions for Fire-fighters

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Wear SCBA and full protective clothing.
Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Ensure adequate ventilation. Avoid formation and inhalation of dust.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Contain the spill. Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Avoid contact with combustibles, organics and ignition sources. Review Section 13 (Disposal Considerations) of this safety data sheet.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not breathe in this product. Avoid repeated or prolonged skin contact. Do not get in eyes. Only use where there is adequate ventilation. Avoid exposure during pregnancy and while nursing. Avoid release to the environment. Prevent accidental contact with incompatible chemicals.

Conditions for Safe Storage

Store in an area that is: cool, dry, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep out of reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Boric acid	2 mg/m3	6 mg/m3				

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

When handling dry concentrated product: wear protective safety glasses. When handling dissolved product: wear chemical safety goggles.

Skin Protection

Protect exposed skin using insulated gloves suitable for low temperatures, long sleeves, protective apron and trousers worn outside boots or over shoes.

Respiratory Protection

Use an appropriate NIOSH approved particulate respirator. Monitor dust levels within working area and ensure adequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Blue prills intermixed with granules and powder. Particle Size: Not available
Odour Threshold	Not available
pH	Not available

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Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Other Information	
Physical State	Solid
Molecular Formula	Not applicable
Molecular Weight	Not applicable
Bulk Density	Not available
Critical Temperature	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use. May intensify fire.

Chemical Stability

Normally stable. Hygroscopic.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Heat. Open flames, sparks, static discharge, heat and other ignition sources. Water, moisture or humidity.

Incompatible Materials

Strong acids, strong alkaloids, oxidizers, organics.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In a fire, the following hazardous materials may be generated. Corrosive, oxidizing nitrogen oxides; potassium oxides; calcium oxides; sulphur oxides; metal oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 (oral)	
Nitric acid, ammonium calcium salt	300-2000 mg/kg (rat)	
Boric acid	2660 mg/kg	

Skin Corrosion/Irritation

Repeated or prolonged exposure can irritate or burn the skin.

Serious Eye Damage/Irritation

Irritation or burn could occur if fertilizer solution is splashed in eyes or dry product contacted.

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STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Very low vapour activity. At high concentrations may cause nose and throat irritation, lung injury.

Skin Absorption

Not absorbed through skin.

Ingestion

If large amounts are swallowed symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Respiratory and/or Skin Sensitization

Mild skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Boric acid		A4		

Nitritotriacetic Acid (NTA) and its salts were determined to be "possibly carcinogenic to humans by IARC, a compound which "may reasonably be anticipated to be a carcinogen" by NTP and a "select carcinogen" by OSHA.

Reproductive Toxicity

Development of Offspring

Boric acid may cause birth defects, based on animal data.

Sexual Function and Fertility

Boric acid may impair male fertility, based on animal data.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Nitric acid, ammonium calcium salt	447 mg/L (Labeo boga (fresh water); 48-hour; fresh water)			
Boric acid	11100 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)			

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

CEPA - National Pollutant Release Inventory (NPRI)

No ingredients are listed in the NPRI.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By MPPI Technical Department

Phone No. 905-793-8000

Date of Preparation February 17, 2022

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer To the best of our knowledge, the information contained herein is accurate. However, neither Master Plant-Prod Inc., nor any of its distributors, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Although certain hazards are described, we cannot guarantee that these are the only hazards that exist. Final determination of suitability of any product is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

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