



SAFETY DATA SHEET

According to Safe Work Australia

1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: OPTIMUM GROW

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use: Hydroponic nutrient concentrate

Details of Manufacturer or Importer:

Growth Technology Pty Ltd
1-45 Stockdale Road
O'Connor WA 6163

Phone Number: +61 8 9331 3091

Emergency telephone number: National Poison Information Centre: 13 11 26

2. HAZARDS IDENTIFICATION

Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)



corrosion

Eye Dam. 1 H318 Causes serious eye damage.

Signal Word Danger

Hazard Statements

H318 Causes serious eye damage.

Precautionary Statements

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

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

P310 Immediately call a POISON CENTER/doctor.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

| | | |
|------------|--|--------|
| 13477-34-4 | Nitric acid, calcium salt, tetrahydrate, Calcium dinitrate tetrahydrate Eye Dam. 1, H318; Acute Tox. 4, H302 | 24.3% |
| 14025-21-9 | Zincate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, disodium, (OC-6-21)- Eye Irrit. 2A, H319 | 0.035% |
| 1303-96-4 | Disodium tetraborate, decahydrate Repr. 1B, H360 | 0.025% |
| 14025-15-1 | Sodium copper ethylenediaminetetraacetate Acute Tox. 3, H301 | 0.025% |
| 13446-49-6 | Molybdcic acid, dipotassium salt Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335 | 0.003% |

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4 . FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, immediately hold eyelids open and rinse with water for at least 15 minutes. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

Symptoms Caused by Exposure:

Skin Contact: May cause mild, transient irritation.

Eye Contact: Causes serious eye damage

Ingestion: Large quantities may cause gastrointestinal irritation.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific Hazards Arising from the Chemical:

Formation of toxic gases is possible during heating or in case of fire including those of oxides of carbon, nitrogen, calcium, phosphorus and sulfur.

This product does not burn.

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 . ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate personal protective equipment. Evacuate all non-essential personnel from affected area. Do not breathe vapours/mists. Ensure adequate ventilation.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal.

7 . HANDLING AND STORAGE

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours/mists. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep in original container tightly closed when not in use. Protect from direct sunlight and extreme heat. Keep away from strong alkalies, oxidizers and reducing agents.

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8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Engineering Controls: Ensure adequate ventilation of the working area.

Respiratory Protection:

Use approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:

PVC, PVA, nitrile, neoprene, rubber or vinyl gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 . PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance: | Twin pack - A and B |
| Form: | Liquid |
| Colour: | Pack A is clear, yellow-brownish. Pack B is light blue. |
| Odour: | Slight |
| Odour Threshold: | No information available |
| pH-Value: | 3-4 |
| Melting point/Melting range: | Not applicable |
| Initial Boiling Point/Boiling Range: | No information available |
| Flash Point: | Not applicable |
| Flammability: | Product is not flammable. |
| Auto-ignition Temperature: | Not applicable |
| Decomposition Temperature: | No information available |
| Explosion Limits: | |
| Lower: | Not applicable |
| Upper: | Not applicable |
| Vapour Pressure: | No information available |
| Relative Density: | 1.07 |
| Vapour Density: | No information available |
| Evaporation Rate: | No information available |
| Solubility in Water: | Soluble in water |

10 . STABILITY AND REACTIVITY

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

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Conditions to Avoid: Direct sunlight and extreme temperatures.

Incompatible Materials: Alkalies, oxidizers and reducing agents.

Hazardous Decomposition Products: Oxides of nitrogen, calcium, phosphorus and sulfur.

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

7757-79-1 Potassium nitrate, Nitric acid, potassium salt

| | | |
|------|------------------|------------------|
| Oral | LD ₅₀ | 3750 mg/kg (rat) |
|------|------------------|------------------|

13477-34-4 Nitric acid, calcium salt, tetrahydrate, Calcium dinitrate tetrahydrate

| | | |
|------|------|----------------------------|
| Oral | LD50 | > 300 - < 2000 mg/kg (rat) |
|------|------|----------------------------|

Acute Health Effects

Inhalation: No adverse health effects expected.

Skin: May cause mild skin irritation.

Eye: Causes serious eye damage.

Ingestion: Large quantities may cause gastrointestinal irritation.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:

Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No information available

Existing Conditions Aggravated by Exposure: No information available

12 . ECOLOGICAL INFORMATION

Ecotoxicity: No information available

Aquatic toxicity: No information available

Persistence and Degradability: No information available

Bioaccumulative Potential: Potassium nitrate has a low potential for bioaccumulation.

Mobility in Soil:

Nitrate has a low potential for adsorption. Portion not taken up by plants, can leach to groundwater. Potassium may be absorbed by plants.

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13 . DISPOSAL CONSIDERATIONS

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:

Please consult your state Land Waste Management Authority for more information.

14 . TRANSPORT INFORMATION

UN Number Not regulated

Proper Shipping Name Not regulated

Dangerous Goods Class Not regulated

Packing Group: Not regulated

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:

| | |
|------------|---|
| 7732-18-5 | Water |
| 7757-79-1 | Potassium nitrate, Nitric acid, potassium salt |
| 13477-34-4 | Nitric acid, calcium salt, tetrahydrate, Calcium dinitrate tetrahydrate |
| 10034-99-8 | Sulfuric acid, magnesium salt, heptahydrate |
| 7778-77-0 | Phosphoric acid, monopotassium salt |
| 15375-84-5 | Manganate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, disodium, (OC-6-21)- |
| 1303-96-4 | Disodium tetraborate, decahydrate |
| 14025-21-9 | Zincate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, disodium, (OC-6-21)- |
| 14025-15-1 | Sodium copper ethylenediaminetetraacetate |
| 13446-49-6 | Molybdic acid, dipotassium salt |

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:

Not Scheduled.

16 . OTHER INFORMATION

Date of Preparation or Last Revision: 06.08.2015

Prepared by: MSDS.COM.AU Pty Ltd

www.msds.com.au

Abbreviations and acronyms:

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC₅₀: Lethal concentration, 50 percent

LD₅₀: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

The information contained in this material safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Growth Technology Pty Ltd makes no representation of the accuracy or

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