



SAFETY DATA SHEET

GroFresh®

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name: **GroFresh®**
Other Name(s): Vapour releasing powder containing 33 g/kg 1-methylcyclopropene

1.2 Recommended use of the chemical and restrictions on use

Product Use: Plant growth regulator for post harvest treatment of fruit.

1.3 Supplier contact details:

Company name: Grosafe Chemicals Limited
Address: 20 Jean Batten Drive Mt Maunganui, 3116
Telephone: 0800 220 002
Email: info@grosafe.co.nz

Emergency telephone number 0800 CHEMCALL (0800 243 622)

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the Hazardous Chemical

Not a hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996
HSNO Substance Approval: Not applicable.
Classifications: Not applicable.

2.2 Label elements:

Pictograms: Not required.

Signal Word: Not required

Hazard statements:

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017

Precautionary statements:

Prevention

-

Response

-

Storage

-

Disposal

P501

Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredients | CAS | Proportion % w/w |
|----------------------|--------------|---------------------|
| 1-Methylcyclopropene | 3100-04-7 | 3.3 |
| Other ingredients | Trade secret | balance |

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General Information:**

For advice call the National Poison Centre, telephone 0800 POISON [0800 764 766]. Have label or Safety Data Sheet at hand.

Ingestion: If swallowed, rinse mouth with water. Call the NATIONAL POISONS CENTRE or doctor for advice if you feel unwell.

Skin Contact: Remove contaminated clothing and wash skin with plenty of soap and water. Get medical advice if irritation persists.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice if irritation persists.

Inhalation: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call the NATIONAL POISONS CENTRE or doctor for advice if you feel unwell.

4.2 Symptoms caused by exposure

Unlikely to cause harmful effects under normal conditions of handling and use.

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES**5.1 Suitable extinguishing media**

Use water spray or fog, foam, CO₂ or dry chemical as appropriate for surrounding materials.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be harmful and/or irritating if inhaled.

Evacuate people to safe area upwind of fire.

5.3 Special protective equipment and precautions for fire fighters

Wear full personal protective equipment including with self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Have this SDS available. In the event of a spill, wear appropriate protective clothing and eye/hand protection. Wash contaminated personal protective equipment and clothing and dry before re-use.

6.2 Environmental precautions

Prevent spillage from entering drains or waterways. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

6.3 Methods and materials for containment and cleaning up

Contain spilled material. Collect into labelled container or bag that can be sealed for safe disposal. Contact with water/moisture will release 1-MCP which is hazardous.

Dispose of contaminated materials to approved landfill in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Read the label before use. Follow label instructions. Avoid contact with eyes, skin and clothing. Avoid breathing vapour. Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.

7.2 Conditions for safe storage

Store securely in the hermetically sealed original packaging out of reach of children and in a dry, cool, well-ventilated area and out of direct sunlight. Store away from animal feed or food stuffs.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters – exposure standards, biological monitoring

| Ingredient | TWA (mg/m ³) | STEL (mg/m ³) |
|------------|--------------------------|---------------------------|
| | | |

8.2 Engineering controls

Use according to label directions.

8.3 Personal protective equipment (PPE)

The following Standards provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Eye/Face Protection: Wear chemical splash goggles if eye contact is possible.

Skin Protection: Wear overalls, impervious gloves, socks and chemical resistant footwear.

Respirator: Follow label instructions. In entering unvented treatment area wear full face respirator fitted with organic/gas cartridge or cannister.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--------------------------------------|
| Appearance | White powder |
| Odour | None |
| Odour threshold | Not known |
| pH | 6.0 – 8.0 (1% aq) |
| Melting/Freezing Point | No data available |
| Boiling Point /Range | No data available |
| Flash point | Non flammable |
| Flammability (solid, gas) | Not applicable |
| Vapour Pressure | 2 X 10 ⁰⁸ mPa (for 1-MCP) |
| Vapour density | No data available |
| Density | 0.4 – 0.538 g/cm ³ |
| Solubility | Dispersible in water |
| Partition Co-efficient n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | No data available |
| Viscosity | Not applicable |

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

This product is unlikely to react or decompose under normal storage conditions.

10.2 Chemical stability

Stable in hermetically sealed packaging under normal temperatures and pressure for storage and use.

10.3 Conditions to Avoid

Avoid storage in direct sunlight or moisture/water.

10.4 Incompatible materials and possible hazardous reactions

Releases 1-MCP gas on exposure to moisture/water. Avoid contact with alkalis, acids and strong oxidising agents.

10.5 Hazardous decomposition products

Fire Decomposition: Unspecified compounds.

10.6 Polymerisation

Not known to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Health hazard information

The product is classified for health hazards according to an assessment of information on product.

11.2 Toxicological information

| | |
|---|---|
| Acute toxicity: | Not classified. |
| Aspiration hazard: | Not classified. |
| Respiratory irritation: | Not classified. |
| Skin corrosion/irritation | Not classified. |
| Serious eye damage/irritation | Not classified. |
| Respiratory or skin sensitisation | Not classified. |
| Germ cell mutagenicity: | No ingredients in product identified as presumed or suspected mutagens. |
| Carcinogenicity | No ingredients in product identified as presumed or suspected carcinogens. |
| Reproductive toxicity | No ingredients in product identified suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity – single/repeated exposure | Not classified. |
| Narcotic effects | Not classified. |

11.3 Toxicological data:

| | |
|----------------------|--|
| 1-methylcyclopropene | Rat, oral LD ₅₀ >5000 mg/kg b.w. Rat, dermal LD ₅₀ >5000 mg/kg b.w. Rat, inhalation LC ₅₀ (4 hr) >5.12 mg/L |
|----------------------|--|

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is not classified as being ecotoxic.

12.2 Environmental Fate

Breakdown in soil and groundwater: Expected to be rapid.

Bioaccumulation: BCF is low for 1-MCP.

Partition coefficient (octanol/water): Information not available.

Soil mobility: Information not available.

12.3 Ecotoxicity data:

1-methylcyclopropene

Fish: Rainbow trout LC₅₀ (96 hr) >0.966 mg/L
Crustacea: *Daphnia spp* EC₅₀ (48 h) >0.776 mg/L
Alga: *Selenastrum capricornutum* EC₅₀ biomass (72 hr)
0>0.838 mg/L
Aquatic plant: *Lemna gibba* EC₅₀ (7 d) >58 mg/kg

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Refer to product label. If possible, dispose of by using according to the label. Otherwise dispose of to an approved landfill in accordance with local regulations. Do not burn.

13.2 Container Disposal

Refer to product label. Empty packaging should be disposed of to an approved landfill. Do not burn.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Classified as non-Dangerous Good according to NZS5433 Transport of Dangerous Goods on Land

Marine Transport (IMO/IMDG):

Classified as non-Dangerous Good by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Classified as non-Dangerous Good by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number: Non-regulated

UN Proper Shipping Name:

Transport hazard class(es)

Packing Group:

HAZCHEM:

Special Precautions for User:

IMDG Marine pollutant:

Transport in Bulk:

SECTION 15: REGULATORY INFORMATION

15.1 HSNO Act 1996

Non-hazardous substance according to Hazardous Substances (Hazard Classification) Notice 2020.

Approved substance number: Not required

Hazardous classifications: Not applicable

Controls: -

Additional information: Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)

15.2 ACVM Act 1997

Registration number: P9823

Refer to www.foodsafety.govt.nz for registration conditions.

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

| | |
|-----------------------|----------------|
| SDS issued | 11 August 2021 |
| SDS supersedes | Not applicable |
| Reason issued | New product |

16.2 ABBREVIATIONS

| | |
|-------------------------|---|
| ADI | Acceptable Daily Intakes |
| CAS number | Chemical Abstracts Service Registry Number |
| CCID | Chemical Classification Identification Database |
| EPA | Environmental Protection Authority |
| ErC₅₀ | Half maximal Effective Concentration |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| Hazchem Code | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| HSNO | Hazardous Substances and New Organisms |
| HS | Health and Safety |
| HSR | Hazardous Substances Register |
| IARC | International Agency for Research on Cancer |
| LC₅₀ | Median Lethal Concentration |
| LD₅₀ | Median Lethal Dose |
| SDS | Safety Data Sheets |
| NOAEL | No Observable Adverse Effect Level |
| NOEL | No Observable Effect Level |
| NOS | Not otherwise specified |
| STEL | Short Term Exposure Limit |
| SWA | Safety Work Australia |
| TWA | Time-Weighted Average |
| UN Number | United Nations Number |

16.3 REFERENCES

EPA CCID and Approved Substance databases
PPDB- Pesticides Properties DataBase

16.4 OTHER

GroFresh® is a trademark of Grosafe Chemicals Limited.

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End of Safety Data Sheet