



SAFETY DATA SHEET

HORTCARE™ Hi-Break™

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name: **HORTCARE Hi-Break**
Other Name(s): -

1.2 Recommended use of the chemical and restrictions on use

Product Use: Plant growth regulator for use on kiwifruit and apples.

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

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996
Classifications: 6.1C, 6.3A, 6.4A, 6.5B, 6.8B, 6.9A, 9.1D, 9.3B, 9.4C.

2.2 Label elements:

Pictograms:



Signal Word:

DANGER

Hazard statements:

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H315 Cause skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H413 May cause long-lasting damage to aquatic life.

- H432 Toxic to terrestrial vertebrates.
 H443 Harmful to terrestrial invertebrates.

Precautionary statements:*Prevention*

- P102 Keep out of reach of children.
 P103 Read label before use.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe mist/vapours/spray.
 P264 Wash hands and any exposed skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves, protective clothing and eye/face protection.
 P281 Use only personal protective equipment as required.

Response

- P101 If medical advice is needed, have product container or label at hand.
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
 P330 Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P312 Call a POISON CENTRE or doctor if you feel unwell.
 P333 + P313 If skin irritation or rash occurs: Get medical advice.
 P362 Take off contaminated clothing and wash before re-use.
 P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
 P311 Call a Poison Centre or doctor.
 P305 + P351 If IN EYES: Rinse cautiously with water for several minutes.
 + P338 Remove contact lenses if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice.
 P391 Collect spillage.

Storage

- P403 + P233 Store in well-ventilated place, Keep cool.
 P405 Store locked up.

Disposal

- P501 Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion
Hydrogen cyanamide	420-04-2	50% w/w
Phosphoric acid	7664-38-2	<3 %
Other ingredients	Trade secret	balance

This is a commercial product whose exact ratio of components may vary slightly.

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] for advice. Have label or Safety Data Sheet at hand

Ingestion: If swallowed, rinse mouth with water. Immediately call the NATIONAL POISONS CENTRE or doctor for advice.

Skin Contact: Remove contaminated clothing and wash skin with plenty of soap and water. Get medical advice if person feels unwell or irritation or rash develops.

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

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.

4.2 Symptoms caused by exposure

Erythema, nausea, tachycardia, fall in blood pressure, headache, irritation of skin and mucous membranes.

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, alcohol resistant foam. Contain to prevent runoff into drains, sewers, waterways.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be harmful if inhaled.

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

In the event of an accidental spill, wear full protective clothing including respiratory, eye and face 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, recover into labelled drums that can be sealed for safe disposal. Clean area with water and detergent.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

APPROVED HANDLER: This product must be under the control of an approved handler, or secured, unless it is being transported by a person with an endorsed Dangerous Goods Licence.

Read the label before use. Do not handle until all safety precautions have been read and understood. To be used by workers who are trained and appropriately supervised. Use in well-ventilated environment. Avoid contact with skin and eyes. Avoid inhalation of spray mist/aerosols. Wear protective equipment such as coat/trouser (overalls), boots, waterproof hat, respirator, gloves and eye protection. Wash hands and exposed skin after handling. Do not use spray

equipment contaminated with this product for any other purpose unless first thoroughly cleaned with a suitable cleaning detergent.

SPRAY DRIFT: Apply this product carefully: spray drift may cause serious damage to desirable plants.

7.2 Conditions for safe storage

Store only in original container. Store locked up in the closed original packaging out of reach of children and in a dry, cool, well-ventilated area. Keep away from food, drink and animals feeding 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)
Cyanamide	2	
Phosphoric acid	1	

Exposure limits have not been established for any of the significant ingredients in this product. No biological limits applicable.

8.2 Engineering controls

Use outdoors to ensure adequate ventilation.

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 goggles or face shield when mixing or applying product.

Skin Protection: Wear impervious gloves (e.g. nitrile, butyl), coat, trousers, waterproof hat. Ensure all skin areas are covered.

Workers in contact with kiwifruit vines within 5 days after spraying, must wear rubber gloves.

Respirator: Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a type G cartridge, suitable for agricultural chemicals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear blue liquid
Odour	Odourless
Odour threshold	Not known
pH	~4 - 5
Melting/Freezing Point	No data available
Boiling Point /Range	~100 °C
Flash point	Non flammable
Flammability (solid, gas)	Not applicable
Vapour Pressure	0.003 hPa @ 20 °C (cyanamide)
Vapour density	No data available
Specific gravity	1.06 g/ml
Solubility	Completely soluble 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 under normal temperatures and pressure for storage and use.

Avoid temperatures >20°C.

10.3 Conditions to Avoid

Avoid storage in direct sunlight.

10.4 Incompatible materials and possible hazardous reactions

Contact with oxidising materials, strong acids, alkalis.

10.5 Hazardous decomposition products

Fire Decomposition: Possible harmful unspecified compounds

Polymerisation: May occur at high pH (alkaline).

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:	Toxic if swallowed, by dermal or inhalation exposure.
Aspiration hazard:	Product contains no components with aspiration hazard.
Respiratory irritation:	May irritate mucous membranes.
Skin corrosion/irritation	Causes skin irritation. Symptoms include face reddening, dermatitis.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Contact skin sensitizer. May result in severe dermatitis.
Germ cell mutagenicity:	No ingredients in product classified as presumed or suspected mutagens.
Carcinogenicity	No ingredients in product classified as presumed or suspected carcinogens.
Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data:

Phosphoric acid	Oral, rat, LD ₅₀ 1530mg/kg b.w Dermal, rabbit , LD ₅₀ 2740 mg/kg b.w.
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SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as being harmful to aquatic life, toxic to terrestrial vertebrates and harmful to terrestrial invertebrates.

Hydrogen cyanamide Trout, LC₅₀ (96hr) 180 mg/L

Bluegill sunfish, LC₅₀ (96hr) 88 mg/L
Daphnia sp. EC₅₀ (48hr) 6.5 mg/L
Selanestrum sp. EC₅₀ (72 hr) 27.5 mg/L
Pseudokirchneriella EC₅₀ (72 hr) 13.2 mg/L

12.2 Environmental Fate

Breakdown in soil and groundwater: Hydrogen cyanamide rapidly degrades to urea (DT₅₀ 1 -6 days).

Bioaccumulation: Not expected to occur.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

If possible, dispose of by using according to the label. May be diluted with water and dispersed over agricultural land as a nitrogen fertiliser. Otherwise, dispose of in an approved landfill or bury below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

13.2 Container Disposal

Do not use packaging for storage of other products. Triple rinse container and add residue to mixture. Empty containers should be taken to an Agrecovery collection site for recycling by the Agrecovery Rural Recycling Programme.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Classified as Dangerous Good Class 6.1 according to NZS5433 Transport of Dangerous Goods on Land

Marine Transport (IMO/IMDG):

Classified as Dangerous Good Class 6.1 by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Classified as Dangerous Good Class 6.1 by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	3287
UN Proper Shipping Name:	TOXIC LIQUID, INORGANIC (HYDROGEN CYANIMIDE 50%)
Transport hazard class(es)	6.1
Packing Group:	III
Special Precautions for User:	-
IMDG Marine pollutant:	YES
Transport in Bulk:	-

SECTION 15: REGULATORY INFORMATION

15.1 HSNO Act 1996

Hazardous substance according to Hazardous Substances (Classification) Notice 2017.

Approved substance number: **HRC000001**
Soluble concentrate containing 520 to 540 g/L hydrogen cyanamide

Hazardous classifications: 6.1C, 6.3A, 6.4A, 6.5B, 6.8B, 6.9A, 9.1D, 9.3B, 9.4C.

Controls: refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)

15.2 ACVM Act 1997

Registration number: P7018.

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	8 th February 2019
SDS supersedes	June 2017
Reason issued	Review of product information and SDS format.

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

16.4 OTHER

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End of Safety Data Sheet

8 February 2019