

SAFETY DATA SHEET

HORTCARE™ Hi-Break™

SECTION 1: Identification of the substance and supplier

Product name: HORTCARE Hi-Break
Recommended Use: Plant growth regulator for use on kiwifruit and apples

Company: Grosafe Chemicals Ltd.
Address: 20 Jean Batten Drive, Mt Maunganui 3116 (P.O. Box 14450 Tauranga 3143)
Email: enquiries@Grosafechemicals.co.nz
Telephone Toll Free Number:
Emergency Telephone Number: 0800 CHEMCALL (0800 243622)
(EMERGENCIES ONLY)

Date of Issue: June 2017

SECTION 2: Hazards Identification

HSNO Hazard Classification: 6.1C, toxic by ingestion, 6.3A, skin irritant, 6.4A, eye irritant, 6.5B sensitizer, 6.8B, reproductive or developmental toxicant, 6.9B, harmful to human target organs, 9.1D, harmful to aquatic organisms, 9.3C, harmful to terrestrial vertebrates. 9.4C Harmful to terrestrial invertebrates. Toxic to bees. In combination with alcohol Hi-Break may cause a severe temporary reaction known as "cyanamide flush". To avoid this do not drink alcohol 24 hours before or within 7 days after using the product.

SECTION 3: Composition/information on ingredients

<u>Ingredients</u>	<u>CAS Number</u>	<u>Content</u>
hydrogen cyanamide	420-04-2	~ 50 %I
phosphoric acid	7664-38-2	~ 20 %I

SECTION 4: First Aid Measures

In case of poisoning by any route contact a doctor or Poisons Information Centre.

Swallowed: If large quantities are ingested, drink plenty of water. Do not induce vomiting. Immediately contact a doctor or Poisons Information Centre. Note: Avoid alcohol consumption after contact with Hi-Break.

Eye: Flush eyes with large quantities of water for 15 minutes. Seek medical advice.

Skin: If contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water. Consult a doctor if irritation persists.

Inhaled: Move affected person to fresh air and keep at rest until recovered. Seek medical advice.

Advise to Doctor: Symptoms: erythema, nausea, tachycardia, fall in blood pressure, headache, irritation of skin and mucous membranes. Ingestion of large amounts can cause circulatory depression and unconsciousness. Treat symptomatically, no specific antidote is known.

Ingestion of small amounts: administer activated charcoal, sodium sulphate and large amounts of water.

Ingestion of large amounts: Consider gastric lavage, having regard for the irritation of mucous membranes.

In case of skin irritation apply corticoid based cream.

SECTION 5: Fire Fighting Measures

UN number:	3287
Dangerous Goods Class:	6.1
Proper Shipping Name:	TOXIC LIQUID, INORGANIC (Hydrogen Cyanamide ~50%)
Extinguishing media:	Fine water spray or foam. HAZCHEM: 2 X
Special exposure hazards:	None
Fire and Explosive Properties:	May form hazardous decomposition products. Stay upwind.
Flammability:	Risk of spontaneous exothermic reaction. Use water to cool sealed drums.

SECTION 6: Accidental Release Measures

Wear protective clothing. In Case of Spill or Leak: Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Collect spilled product and place into compatible disposal container. Scrub area with water plus detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. If spill does enter waterways inform the local authority.

SECTION 7: Handling and Storage

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.

TRACKING: The location and movement of this product must be recorded at each stage of its lifecycle.

RECORD KEEPING: Records of use as described in NZS 8409 Management of Agrichemicals must be kept.

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

Store the material in a cool (15 °C. or less), secure area out of reach of children and domestic animals. Do not store with food or drink. Wash thoroughly with soap and water after handling.

Product kept from one season to the next store in a cool store at 4 °C.

SECTION 8: Exposure Control/Personal Protection

National Exposure Standards	WES TWA (cyanamide)	2 mg / m ³
	WES TWA (phosphoric acid)	1 mg / m ³ STEL: 2 mg / m ³
	EU TWA (cyanamide)	1 mg / m ³ 0.58 ppm
	Child: TEL air:	0.0014 mg / m ³ air
	TEL skin surface deposition:	0.0026 mg / m ² skin
	Adult: TEL air:	0.0027 mg / m ³ air
TEL skin surface deposition:	0.0016 mg / m ² skin	

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion: Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material, Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:: Where contact is likely, wear A NIOSH approved respirator, chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits.

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

SECTION 9: Physical and Chemical Properties

Appearance:	Blue coloured liquid
Odour:	Odourless
pH:	ca.4 - 5
Flammable (Explosive) Limits:	Not flammable
Vapour Pressure:	0.003 hPa @ 20 °C. (cyanamide)
Relative density:	ca. 1.06g/cm ³
Solubility:	Readily soluble in water

SECTION 10: Stability and Reactivity

Stability:	Stable when stored appropriately (see Sec. 7)
Conditions to avoid:	Avoid temperatures above 20 °C., direct sunlight,
Materials to avoid:	Oxidising materials, strong acids, alkalis.
Hazardous Decomposition Products:	May be formed at high temperatures
Hazardous Polymerisation:	May occur at high ph (alkali)

SECTION 11: Toxicological Information

Cyanamide: acute toxicity	
Oral	Toxic, may cause dizziness, face reddening, respiratory distress
Dermal	Can produce severe dermatitis, sensitisation
Inhaled	Harmful. May cause irritation of mucous membranes
Eye	may cause severe irritation
Chronic toxicity	
Mutagenicity:	Not expected

SECTION 12: Environmental Information

Under aerobic conditions hydrogen cyanamide is rapidly degraded to urea (DT 50 1 – 6 days). Do not allow animals, especially dogs to come into contact with spray mist or tank washings.

Acute toxicity		
Fish:	LC50/ 96 hr/trout:	180 mg/l
	EC50/ 96 hr/ bluegill sunfish	88 mg/l
Daphnia	EC50/ 48 hr	6.5 mg/l
Algae	EC50/ 90 hr/ Selanestrum	27.5 mg/l
	EC50/ 90 hr/ Pseudokirchneriella	13.2 mg/l
Bees	Very toxic to bees	

SECTION 13: Disposal Considerations

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to regional or local body bylaws. Waste product may be diluted and dispersed over agricultural land as a nitrogen fertiliser.

SECTION 14: Transport Information

Scheduled as Dangerous Goods for Transport Purposes

UN Number: 3287
UN Shipping Name: TOXIC LIQUID, INORGANIC (hydrogen cyanamide ~ 50 %)
UN Classification: Class 6.1
Subsidiary risk:
UN Packing Group: III
Marine Pollutant: yes
HAZCHEM Code: 2 X

Do not carry this product on a passenger service vehicle.
Segregation: Check the Land Transport Dangerous Goods Rule 45001
For Sea transport: See NZS5433

SECTION 15: Regulatory Information

HORTCARE Hi-BREAK is a registered product under the ACVM Act 1997 (P7018).
See www.nzfsa.govt.nz/acvm/ for registration conditions.

HORTCARE Hi-BREAK is approved under the HSNO Act 1996 (HSR000807).
See www.ermanz.govt.nz for approval conditions

Note: The information contained herein is given in good faith, but no warranty, expressed or implied, is made.
Consult Grosafe Chemicals Ltd. for further information.