



Safety Data Sheet: HarvestCide® Granules

Post-Harvest Solutions Ltd Safety Data Sheet Version: 3
Date /Revised: 26/09/2018
Product: **HarvestCide® Granules**

1. Identification of the Material and Supplier

HarvestCide® Granules

Uses: Halogen based broad spectrum biocide.

Manufacturer/supplier

Post Harvest Solutions Limited
52 Rangitane Road
Whakatu 4172
Hawkes Bay
New Zealand

Phone: +64 6 877 7668

Email: info@postharvest.co.nz

Web: www.postharvest.co.nz

Emergency Information

National Poisons Centre (New Zealand): **0800 POISON (0800 764 766)**

2. Hazard Identification

Classified as a dangerous good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to the criteria of the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 HSR000774 – Water dispersible granule containing 960 g/kg bromo-chloro-dimethylhydantoin (BCDMH).



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HNSO Classifications: 5.1.1B, 6.1B (I), 6.1D (O), 6.5B, 8.2C, 8.3A, 9.1A, 9.3C

Signal Word: DANGER

Hazard Statements:

- H272 May intensify fire; oxidizer.
- H302 Harmful if swallowed.
- H330 Fatal if inhaled.
- H317 May cause an allergic skin reaction.
- H314 Causes severe skin burns.
- H318 Causes serious eye damage.
- H410 Very toxic to aquatic life with long lasting effects.
- H433 Harmful to terrestrial vertebrates.

Prevention Statements:

- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep/Store away from clothing, incompatible materials, or combustible materials.
- P221 Take any precaution to avoid mixing with combustibles/incompatible materials.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P260 Do not breathe mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P284 Wear respiratory protection.
- P261 Avoid breathing mist/vapours/spray
- P272 Contaminated work clothing shouldn't be allowed out of the workplace.
- P273 Avoid release to the environment.

Response Statements:

- P101 If medical advice is needed, have product container or label at hand.
- P370+P378 In case of fire: Use water spray, fog or mist, alcohol resistant foam for extinction. DO NOT use CO2 or dry chemical
- P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P310 Immediately call a POISON CENTER or doctor/physician.

P320/P321	Specific treatment is urgent.
P363	Wash contaminated clothing before re-use.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water/shower.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.

Storage Statements:

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

3. Composition/information on Ingredients

Chemical Nature:

Ingredient	CAS Number	Content (% w/w)
Bromochlorodimethylhydantoin	16079-88-2	96
Inert ingredients	N/A	4

4. First-Aid Measures

General advice:

Immediately take off contaminated clothing and wash before reuse.

Inhalation:

If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice and attention immediately from the **POISON CENTRE (0800 764 766)** or a doctor.

Skin Contact:

Gently wash under shower with plenty of soap and water. If skin irritation occurs get medical advice and attention immediately from the **POISON CENTRE (0800 764 766)** or a doctor.

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 and attention immediately from the **POISON CENTRE (0800 764 766)** or a doctor.

Ingestion:

If swallowed, rinse mouth, do not induce vomiting. Get medical advice and attention immediately from the **POISON CENTRE (0800 764 766)** or a doctor.

Note to physician:

Irritates mucous membranes. Dust will burn respiratory tissues severely. Prolonged skin contact may cause reddening and superficial necrosis. Will cause severe irritation of eyes, corneal burning on prolonged contact with the dust or concentrated suspension. Can cause irreversible eye damage. Will burn digestive tract if swallowed.

5. Fire-Fighting Measures

Suitable extinguishing media:

Water spray, fog or mist. Alcohol resistant foam. Do not use CO₂ or dry chemical

Specific Hazards:

Toxic gases/vapours/fumes of bromine, chlorine, oxides of carbon and nitrogen.

Protective Equipment and precautions for fire fighters

Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or gases.

Hazchem Code: 4YE

6. Accidental Release Measures

Emergency Procedures:

Clear area of all unprotected personnel. Use personal protective equipment (PPE) to avoid skin and eye contact and breathing in vapours. **For details on PPE, refer to section 8.** Contain spills by absorbance with inert material. Clean up spills immediately to prevent further accidents.

Environmental precautions

Prevent spilled material from entering drains/surface waters/groundwater. If contamination has occurred, advise local emergency services.

Methods for cleaning up or taking up

Sweep or shovel spilled material into suitable containers for reuse or disposal. Avoid

generating dust. Wash area down with excess water. Recover the cleaning water for subsequent disposal.

7. Handling and Storage

Handling

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Observe good personal hygiene practices when handling this product. Do not eat, drink, or smoke while using this product. Remove contaminated clothing and wash thoroughly after handling. . Avoid contact with eyes, skin and clothing by use of PPE if necessary (**refer to section 8**). Do not inhale dust or mist etc..

Storage

Store locked up in a cool, dry, well-ventilated area out of direct sunlight. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep the container closed when not in use. Store from sparks, heat and flames. Store alone away from oil, fuel and other chemicals. Keep out of reach of children or animals

8. Exposure Controls and Personal Protection

Workplace Exposure Standards

None established for this product.

Engineering Controls

Use in a well ventilated area. If an inhalation risk exists, use mechanical exhaust ventilation. Maintain dust level below the recommended exposure standard for nuisance dust. When applying as a spray do not atomise as this will increase the risk of respiratory toxicity. Use PPE, as specified below:

PPE (Personal Protective Equipment)

The selection of PPE is dependent on a detailed risk assessment. This should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Respiratory protection:

Where an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716

Hand protection:

Chemical resistant protective gloves. Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time according to EN 374); e.g. nitrile rubber (0.4mm), chloroprene rubber (0.5mm), polyvinylchloride (0.7mm) and other.

Eye protection:

Dust-proof safety goggles with side shields and/or face-shield, as appropriate.

Body protection:

Hand protection with suitable chemically resistant long gloves (e.g. nitrile rubber 4mm). Chemical protection suit, overalls, apron with rubber boots must be chosen depending on activity and possible exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Wearing of close work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work.

9. Physical and Chemical Properties

Appearance:	White, free flowing granules with faint halogen odour.
Vapour Pressure:	9.35X10 ⁻³ Pa @25°C
Boiling Point:	Decomposition: 160°C
Freezing/melting point:	163-164°C
Solubility: Water	0.2g/100ml @25°C
Specific gravity:	1.8
Flashpoint:	N/A
Octanol/water partition coefficient:	0.35
Explosion properties:	Not explosive
Oxidation properties:	Strong oxidizing agent

10. Stability and Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Keep dry.
Incompatible Materials	Avoid mixing with any other chemical. Spontaneous combustion may result.



Hazardous Decomposition Products

Will decompose at 160°C, releasing poisonous fumes of hydrogen bromide, bromine and hydrogen chloride. Strong oxidizer. Forms explosive mixtures with combustible, organic or other easily oxidisable materials. Will smoulder in large fires, fuelled by other materials, with emission of dense black smoke.

11. Toxicological Information

Acute toxicity – Oral :	LD ₅₀ >1.5g/kg Rat
Acute toxicity - Dermal :	LD ₅₀ >2.0g/kg Rabbit
Acute toxicity – Inhalation:	LC ₅₀ 0.53mg/L Rat
Skin irritation :	Severe skin irritant
Eye irritation:	Severe Eye irritant
Sensitization :	Prolonged exposure may cause irreversible damage.
Chronic Toxicity:	
Carcinogenicity:	Not a known carcinogen
Mutagenicity:	Not mutagenic
Reproduction toxicity:	Not a reproductive toxin

12. Ecological Information

Ecotoxicity

Very toxic to aquatic organisms.

Harmful to terrestrial vertebrates. Low toxicity to birds.

Do not contaminate bodies of water with product or empty container.

E.E.L. Unestablished.

T.E.L. Unestablished.

Fish: LC₅₀ = 0.4mg/litre (Rainbow trout)
LC₅₀ = 0.46mg/litre (Bluegill sunfish)
LC₅₀ = 1.2mg/litre, acute flow through (Eastern oyster)

Crustaceans: LC₅₀ = 0.75mg.litre, 48hr (Daphnia magna)

Algae (scenedesmus subspicatus): Highly toxic to algae

Birds: Acute LD₅₀ = 1,839mg/kg (Bobwhite quail),
Acute LD₅₀ > 5000 mg/kg (Mallard duck) dietary.

13. Disposal Considerations

Disposal Methods

Dispose of at an approved waste site. Refer to waste management authority.

Legislation

Dispose of in accordance with relevant local legislation. Contact a specialist waste company or local regulator for advice

14. Transport Information

Road and Rail Transport:


Classified as dangerous goods by the criteria of NZS 5433:2012: Transport of Dangerous Goods on Land

Sea Transport

IMDG: Classified as dangerous goods under transport regulations

Air Transport

IATA/ICAO: Classified as dangerous goods under transport regulations

	
Rail/Road (NZS 5433:2012)	UN Shipping Name: OXIDISING SOLID N.O.S. (BROMOCHLORODIMETHYLHYDANTOIN) UN Number: 1479 Class: 5.1 Packing group: II Hazchem Code: 4YE Marine Pollutant and harmful to terrestrial vertebrates.
Sea (IMDG)	
Air (IATA/ICAO)	

15. Regulatory Information

Classified as hazardous according to the criteria of the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001. HSR000774 – Water dispersible granule containing 960 g/kg bromo-chloro-dimethylhydantoin (BCDMH).

This product must be under the care of certified handler at all times. A record must be kept of the use and disposal of this product. Tracking is required.

Other Registration status:

ACVM Registered Number: P008400

16. Other Information

Additional Information

This safety data sheet was upgraded on 26/09/2018 (version 3) to bring all Post-Harvest Solution's SDSs into a common format. It replaces version 2 (15/10/2015).

The effects from exposure to this product depend on several factors including frequency and duration of use, the amount used, control measures adopted, personal protective equipment used and method of use. It is impractical to prepare a data sheet that encompasses all possible situations; therefore, it is anticipated that users will assess the risks and apply control measures as appropriate.

Abbreviations

ACGIH – American Conference of Governmental Industrial Hygienists

ADG Code Australian Dangerous Goods

AICS – Australian Inventory of Chemical Substances

EN - European Standard

GHS - Globally Harmonized System of classification and labelling of chemicals

HSNO. Hazardous Substances New Organisms

IATA - International Air Transport Association

ICAO - International Civil Aviation Organization

IMDG - International Maritime Dangerous Goods Code

LD50 LD stands for Lethal Dose. LD50 is the amount of a substance, given all at once, which causes the death of 50% (one half) of a group of test animals.

NZIoC – New Zealand Inventory of Chemicals.

OECD - Organisation for Economic Co-operation and Development

PPE – Personal Protective Equipment

TLV – Threshold Limit Values

TWA – Time-Weighted Average

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (COA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor



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Version 3

a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Post-Harvest Solutions Ltd.

HarvestCide is a registered trademark of Post-Harvest Solutions Ltd NZ.
