



SAFETY DATA SHEET

HORTCARE® CHLORPYRIFOS 50EC

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name: **HORTCARE® CHLORPYRIFOS 50EC**
Other Name(s): Emulsifiable concentrate containing chlorpyrifos 500 g/L

1.2 Recommended use of the chemical and restrictions on use

Product Use: A broad spectrum insecticide for use in a wide range of arable and fruit crops.
For professional users only.

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
HSNO Substance Approval: HSR000224
Classifications: Flammable liquid Category 4, Acute oral toxicity Category 3, Acute dermal toxicity Category 3, Acute inhalation toxicity Category 4, Aspiration hazard Category 1, Eye irritation Category 2, Reproductive toxicity Category 2, Specific target organ toxicity (repeated exposure) Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to terrestrial invertebrates, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1.

2.2 Label elements:

Pictograms:



Signal Word: DANGER

Hazard statements:

H227 Combustible liquid
H301 Toxic if swallowed.

H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H422	Toxic to the soil environment.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H431	Very toxic to terrestrial vertebrates.
H441	Very toxic to terrestrial invertebrates.

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017 and Hazardous Substances (Hazardous Property Controls) Notice 2017.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Do not apply directly into or onto water.

A person who applies the product must ensure the application area does not include -

- (a) bees that are foraging; or
- (b) plants (including trees and weeds) that are either-
 - (i) in flower or part flower; or
 - (ii) likely to flower within any specified period (if a control is set by EPA).

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.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260	Do not breathe dust/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing and eye/face protection.
P281	Use personal protection equipment as required.

Response

P101	If medical advice is needed, have product container or label at hand.
P308 + P313	IF exposed or concerned: Get medical advice.
P314	Get medical advice/attention if you feel unwell.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P363	Wash contaminated clothing before reuse.

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice.
P370 + P378	In case of fire: Stop leak if safe to do so.
P391	Collect spillage.
Storage	
P403 + P235	.Store in a well-ventilated area. Keep container tightly closed.
P405	Store locked up.
Disposal	
P501	Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion % w/w
Chlorpyrifos	2921-88-2	46 – 47*
Calcium dodecylbenzenesulphonate	26264-06-2	<3
Other ingredients	Trade secret	balance

*To give equivalent to chlorpyrifos 500 g/L.

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:

If exposed or concerned, get medical advice. 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. Do not induce vomiting. Aspiration hazard. 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 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/attention 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.

4.2 Symptoms caused by exposure

Nausea, dizziness, confusion, respiratory difficult, convulsions.

4.3 Medical attention and special treatment

Chlorpyrifos is an organophosphate compound. Atropine is the specific antidote.

Consider gastric lavage if large quantities have been ingested.

An initial trial dose of 2 mg intravenously is recommended, and repeated every 15 minutes until an atropine effect is observed (dilated pupils, dry mouth, flushing of skin). Reduce to a schedule that maintains full atropinisation for at least every 24 hours. For regular users of chlorpyrifos, an out of season blood sample for cholinesterase level is recommended.

Pralidoxime promotes the activation of acetyl cholinesterase. It is most effective if given early but is still effective up to 48 hours after poisoning. Dose: 1 -2 mg by slow I.V. infusion. It should be regarded as an aid to atropine, not a replacement.

In case of respiratory difficulty, monitor until recovery.

Convulsions: Control with diazepam (Valium) 5 -10 mg by slow I.V.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray or fog, or foam. Contain extinguishing media to prevent runoff into drains, sewers, waterways.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be toxic/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. For small liquid spills, use absorbent material such as sand, soil, vermiculite and recover into labelled drums that can be sealed for safe disposal. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid and transfer to drums for disposal. Clean area with water and detergent. Do not allow cleaning liquid to be released into environment. 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. Do not apply into or onto water.
Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.
Use only outdoors or in well-ventilated area.
When applied product avoid inhalation of spray mist/aerosols. Wear protective equipment such as coat/trouser (overalls), boots, gloves and eye protection.
Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.
Do not eat, drink or smoke when using.
Do not use spray equipment contaminated with this product for any other purpose unless first thoroughly cleaned with a suitable cleaning detergent.

7.2 Conditions for safe storage

Store locked up in the closed original packaging out of reach of children and in a dry, cool, well-ventilated area and out of direct sunlight. Keep away from sources of heat, food, drink and animal feedstuffs.
Storage of 100 L or more of this product requires an emergency response plan, secondary containment and signage.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters – exposure standards, biological monitoring

Ingredient	TWA (mg/m ³)	STEL (mg/m ³)
Chlorpyrifos	0.2 (skin)	

8.2 Engineering controls

Use in well-ventilated area or outdoors.

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 impervious chemical resistant gloves (e.g. nitrile, butyl), coveralls, socks and chemical resistant footwear. For overhead spray exposure, wear chemical resistant headgear. Ensure all skin areas are covered.

Respirator: Use outdoors in well-ventilated area or use local exhaust ventilation. Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a cartridge, suitable for organic vapours.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Amber/clear brown liquid
Odour	Characteristic. aromatic
Odour threshold	Not known
pH	6.5 – 7.5. (1% aqueous dispersion)
Melting/Freezing Point	No data available
Boiling Point /Range	No data available
Flash point	~65 °C
Flammability (solid, gas)	Not applicable
Vapour Pressure	No data available
Vapour density	No data available
Specific gravity/bulk density	c.a 1.1 g/cc
Solubility	Emulsifies 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.

10.3 Conditions to Avoid

Avoid storage in direct sunlight or exposure to heat.

10.4 Incompatible materials and possible hazardous reactions

Oxidising materials, strong acids, alkalis.

10.5 Hazardous decomposition products

Fire Decomposition: Smoke, carbon and other 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:	Classified as toxic if ingested, and harmful in contact with skin or if inhaled.
Aspiration hazard:	Product classified with aspiration hazard warning. Contains aromatic hydrocarbon solvent.
Respiratory irritation:	May be slightly irritating.
Skin corrosion/irritation	May cause mild skin irritation.
Serious eye damage/irritation	Classified as may cause serious eye irritation.
Respiratory or skin sensitisation	Not classified as sensitiser.
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	Classified as may cause reproductive/developmental effects.
Specific target organ toxicity – single/repeated exposure	Classified as causes damage to organs or systems (neurotoxicity) through prolonged or repeated exposure.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data:

Chlorpyrifos	Oral, LD ₅₀ (rat) 96 – 480 mg/kg bw Dermal, LD ₅₀ (mouse) 120 mg/kg bw
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SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as very toxic to aquatic life and with long lasting effects, toxic to the soil environment, very toxic to terrestrial vertebrates, and very toxic to terrestrial invertebrates (bees).

12.2 Environmental Fate

Breakdown in soil and groundwater: DT₅₀ >30 days. Half Life expected to be ca. 72 days.

Bioaccumulation: Yes. BCP 100 -3000.

Partition coefficient (octanol/water): Chlorpyrifis logP 4.7 at 20°C, pH 7

Soil mobility: Chlorpyrifos is expected to absorb on soil.

12.3 Ecotoxicity data:

Chlorpyrifos	Fish: <i>Menidia peninsulae</i> LC ₅₀ (96 hr) 0.0004 mg/L Crustacea: <i>Ceriodaphnia dubia</i> EC ₅₀ (48 h) 0.00058 mg/L Alga: <i>Selenasrum capricornutum</i> EC ₅₀ (72 hr) 0.064 mg/L Bee: LD ₅₀ (contact) 0.059 µg bee
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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.

13.2 Container Disposal

Refer to product label. Do not use packaging for storage of other products. Empty water rinsed containers should be disposed of to an approved pesticide recycler or crushed and sent to approved landfill.

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: 3018

UN Proper Shipping Name: ORGANOPHOSPHATE PESTICIDE, LIQUID, TOXIC (CHLORPYRIFOS 50%)

Transport hazard class(es) 6.1

Packing Group: III

HAZCHEM: 2X

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 (Hazard Classification) Notice 2020.

Approved substance number: HSR000224

Hazardous classifications: Flammable liquid Category 4, Acute oral toxicity Category 3, Acute dermal toxicity Category 3, Acute inhalation toxicity Category 4, Aspiration hazard Category 1, Eye irritation Category 2, Reproductive toxicity Category 2, Specific target organ toxicity (repeated exposure) Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to terrestrial invertebrates, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1.

Controls: Refer to control on www.epa.govt.nz for all Controls.

Restricted to workplaces only	Yes
Quantity that requires management in accordance with HSW HS regulations	Any quantity
Threshold quantity to be secured when left unattended	Any quantity
Location compliance certificate	1000 L
Secondary containment and emergency response plan threshold quantity	100 L
Signage threshold quantity	100 L

Record keeping requirement (3 L applied in 24 h period)	Yes
Qualified trained handler for mixing, loading, application	Yes

Additional Controls :

The following are the Regulation 77A Controls

- The substance must not be applied onto or into water.
- Application parameters

This control come into effect on 1 July 2015

(1) The person in charge of the application of a substance and any person applying the substance must ensure that application of the substance is carried out in accordance with the following application restrictions:

The substance may be applied at a maximum rate of 1500 g chlorpyrifos / ha.

- LABEL STATEMENT

(2) A person must not supply a hazardous substance to any other person unless the substance label shows the following information:

(a) the maximum application rate;

(b) the maximum application frequency if one is set.

(3) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (2).

- Spray drift mitigation

(1) No person may apply the substance in a manner that results in adverse effects beyond the boundary of the subject property.

(2) Any person applying the substance must take all reasonable care to avoid off-target movement of the substance.

- LABEL STATEMENT

(3) The following statement must appear on the substance label:

The person applying this substance must not cause adverse effects beyond the boundary of the treated property, and must also avoid adverse effects from spray drift occurring. Mitigation measures employed must be recorded as part of the application records.

(4) A person must not supply a hazardous substance to any other person unless the substance label includes the statement specified in (3).

(5) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (3).

- CONTROL/LABEL STATEMENT R-8: Identification as an organophosphate or carbamate substance

This control come into effect on 1 July 2015

- (1) A person must not supply a hazardous substance to any other person unless the substance label clearly states that the substance is an organophosphate -containing substance.
- (2) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (1).

- CONTROL/LABEL STATEMENT R-9: Label warning of effects on bees R-9

This control come into effect on 1 July 2015

- (1) A person must not supply a hazardous substance to any other person unless the substance label shows the following statement (or equivalent):
This product is toxic to bees. Do not apply this product to any plant or tree likely to be visited by bees—
 - (a) *at the time of application; or*
 - (b) *immediately after application until spray has dried; or*
 - (c) *in areas where bees are foraging.*
- (2) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (1).

- CONTROL R-11: Notification

This control came into effect on 1 July 2015

This control applies for aerial application of the substance only:

- (1) For wide-dispersive applications, no person may apply, or engage another person to apply, the substance unless that person has given written notice of the proposed application to any person likely to be directly affected by the application, including occupiers and owners of land, dwellings or buildings or property that is immediately abutting the application area.
- (2) The notice referred to in subclause (1) must—
 - (a) be given at least 2 working days but no more than 4 weeks in advance of each application; and
 - (b) specify the following:
 - (i) the location of application area that the substance will be applied to;
 - (ii) the date and approximate duration of each application;
 - (iii) the steps to be taken by the notified parties to avoid exposure;
 - (iv) the name of the organisation/s undertaking the application;
 - (v) contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application).

- LABEL STATEMENT

- (3) A person must not supply a hazardous substance to any other person unless the substance label shows that notification of affected parties and

neighbours, in accordance with the requirements of (1) and (2), must be carried out in advance of the application.

(4) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (3).

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: P4987

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	13 August 2021
SDS supersedes	September 2016
Reason issued	Review product classifications, information and SDS format update.

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

HORTCARE is a trademark of Grosafe Chemicals Limited.

13 August 2021

Information contained in this Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it's expected that individuals receiving the information will exercise independent judgement in determining its appropriateness for a particular purpose. Grosafe Chemicals Ltd makes no representation whatsoever as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, and no responsibility as permitted by law for any loss or damage arising from or connection with the supply or use of the information in this Safety Data Sheet.

End of Safety Data Sheet