

## Toppel® 500

### Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

<b>Product Name:</b>	<b>Toppel® 500</b> 7976088 (5 Litres)
<b>Product Code:</b>	7976090 (20 Litres) 7976096 (1000 Litres)
<b>Recommended Use:</b>	Broad spectrum organophosphate insecticide for use in agriculture and horticulture
<b>Restrictions of Use:</b>	Refer to Section 15
<b>Company Identification:</b>	Ravensdown Limited
<b>Address:</b>	292 Main South Road, Hornby, Christchurch, 8042 PO Box 1049, Christchurch 8011
<b>Customer Centre:</b>	0800 100 123
<b>National Poisons Information Centre:</b>	0800 POISON (0800 764 766)
<b>Emergency Phone Number:</b>	0800 CHEMCALL (0800 243 622) (24hr) (Emergencies Only)
<b>Transport Emergency Phone Number:</b>	111 - tell operator what service is needed: Fire, Ambulance or Police
<b>Date of SDS Preparation</b>	31 May 2022

### Section 2: HAZARD IDENTIFICATION

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

<b>EPA Approval No:</b>	HSR000224
<b>Pictograms:</b>	
<b>Signal Word:</b>	<b>DANGER</b>

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1D	H227	Combustible liquid.	Flam. Liq. 4
6.1C (oral)	H301	Toxic if swallowed.	Acute Tox. 3
6.1C (dermal)	H311	Toxic in contact with skin.	Acute Tox. 3
6.1C (inh)	H331	Toxic if inhaled.	Acute Tox. 3
6.1E (asp)	H304	May be fatal if swallowed and enters airways.	Asp. Tox. 1
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9A	H372	Causes damage to organs through prolonged or repeated exposure.	STOT RE 1
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1
9.2B	H422	Toxic to the soil environment.	
9.3A	H431	Very toxic to terrestrial vertebrates.	
9.4A	H441	Very toxic to terrestrial invertebrates.	

Prevention Code	Prevention Statement
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 or hot surfaces. No smoking.
P260	Do not breathe fumes, vapours or 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 clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P361	Remove/Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use foam, carbon dioxide or dry chemical for extinction.

Storage Code	Storage Statement
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

### Section 3: COMPOSITION INFORMATION

INGREDIENT	CAS No.	CONTENT
Chlorpyrifos	2921-88-2	500g/L
Aromatic hydrocarbon	6472-94-5	30-60%
other ingredients		To 100%

### Section 4: FIRST AID MEASURES

Routes of Exposure:	
<b>If in eyes:</b>	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/attention.
<b>If on skin:</b>	Take off contaminated clothing and wash before re-use. Wash affected area thoroughly with soap and water. If skin irritation occurs: Get medical advice/ attention.
<b>If ingested:</b>	Rinse mouth. Never give anything by mouth to an unconscious person. If swallowed DO NOT induce vomiting. For advice, contact the National Poisons Centre on 0800 POISON (0800 764 766). Seek medical assistance immediately.
<b>If inhaled:</b>	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Most important symptoms and effects, both acute and delayed	
<b>Symptoms:</b>	Please refer to Section 11 for full details and symptoms.
<b>Eyes:</b>	Causes serious eye irritation.
<b>Skin:</b>	Causes mild skin irritation. Toxic if in contact with skin.
<b>Ingested:</b>	Toxic if swallowed. May be fatal if swallowed and enters airways.
<b>Inhaled:</b>	Toxic if inhaled.
<b>Chronic:</b>	Causes damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.

<b>Notes to Doctor:</b>	<p>Atropine is the specific antidote. Large amounts are required in organophosphate poisoning. An initial trial dose of atropine 2mg intravenously should be given and repeated every 15 minutes until an atropine effect is noted (dilated pupils, dry mouth, flushing of the skin). Reduce to a schedule that maintains full atropinisation for at least 24 hours. The dose and frequency of atropine will vary from case to case. Medical: Take blood samples for cholinesterase levels before starting treatment. Stomach washout if organophosphate has been ingested. Pralidoxime enhances the reactivation of acetyl cholinesterase. It is most effective if given early, but can still be started up to 48 hours after poisoning. Pralidoxime is given at a dose of 1-2mg by slow I.V. infusion at a maximum rate of 0.5gm/min. It is used as an adjunct to, not a replacement for atropine.</p> <p>Respiratory Difficulty - Carefully monitor for 24 hours.</p> <p>Convulsions - Control with Diazepam (Valium) 5-10mg by slow I.V. or I.M.</p> <p>Repeat as necessary.</p>
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### Section 5: FIRE FIGHTING MEASURES

<b>Hazard Type</b>	Combustible Liquid
<b>Hazards from combustion products</b>	If involved in a fire, may evolve toxic and irritating fumes.
<b>Suitable Extinguishing media</b>	Foam, carbon dioxide or dry chemical
<b>Precautions for firefighters and special protective clothing</b>	Full protective clothing and self-contained breathing apparatus.
<b>HAZCHEM CODE</b>	<b>2X</b>

### Section 6: ACCIDENTIAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>
Wear appropriate protective clothing as detailed in Section 8. Exclude non-essential people from the area.
<b>Environmental precautions:</b>
Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.
<b>Methods and material for containment and cleaning up:</b>
Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Dispose of according to Section 13.

### Section 7: HANDLING AND STORAGE

<b>Handling:</b>	<p>Read label before use.</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Avoid contact with skin, eyes and inhalation of spray mist.</p> <p>Keep away from heat, sparks, open flames or hot surfaces. No smoking.</p> <p>Do not breathe fumes, vapours or spray.</p> <p>Wash hands thoroughly after handling.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Use only outdoors or in a well-ventilated area.</p> <p>Avoid release to the environment.</p> <p>Wear protective clothing as detailed in Section 8.</p> <p>Use personal protective equipment as required.</p> <p><b>Record Keeping:</b> Records of use as described in NZS 8409 Management of Agrichemicals must be kept. Record keeping must also include details of measures taken to ensure that there are no adverse effects beyond the boundary of the subject property into an adjoining property or sensitive area.</p>
<b>Storage:</b>	<p>Keep out of reach of children.</p> <p>Store away from incompatible materials listed in Section 10.</p> <p>Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertiliser, seed and sources of ignition.</p> <p>Store in accordance with NZS 8409 Management of Agrichemicals.</p> <p>Do not store with Class 1, 2, 3.2, 4 or 5 substances.</p> <p>Stores containing 500lt of this product or in aggregate with substance of the same hazard classification must have at least 2 fire extinguishers.</p> <p>This product is subject to signage and secondary containment when stored in quantities of 100 litres or more, either alone or in aggregate with substances of the same hazard classification. More than 100 litres require emergency response plans. For full details refer to NZS 8409 Management of Agrichemicals and HSNO Regulations (Emergency Management and Identification Regulations).</p>

## Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Chlorpyrifos (skin) [2921-88-2]	-	0.2	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2019 11<sup>TH</sup> EDITION.

<b>Engineering Controls:</b>	Handle in well ventilated area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. Avoid inhalation of spray mist.
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#### Personal Protection Equipment:



<b>Eyes:</b>	When opening the container, preparing spray and using the prepared spray wear safety goggles and waterproof headgear.
<b>Skin/Hands:</b>	When opening the container, preparing spray and using the prepared spray wear full protective clothing such as chemical resistant boots with socks, a PVC spray suit or coat and trousers (worn outside boots) and elbow length gloves.
<b>Respiratory:</b>	Wear respiratory protection, especially where ventilation is poor.
<b>General:</b>	Do not eat, drink or smoke while using this product. Remove protective clothing and wash hands and face before meals and after work. Wash protective clothing daily after work.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Liquid
<b>Colour</b>	Clear Amber
<b>Odour</b>	Solvent odour
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not available
<b>Boiling Point</b>	Not available
<b>Melting Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	62 -65.6°C
<b>Flammability</b>	Combustible
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Specific Gravity</b>	1.09
<b>Water Solubility</b>	Emulsifies in water
<b>Partition Coefficient:</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Kinematic Viscosity</b>	Not available
<b>Particle Characteristics</b>	Not available
<b>Other information</b>	(EC) Emulsifiable concentrate

## Section 10: STABILITY AND REACTIVITY

<b>Stability of Substance</b>	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
<b>Possibility of hazardous reactions</b>	Not available
<b>Conditions to Avoid</b>	None known.
<b>Incompatible Materials</b>	Avoid contact with oxidising agents, strong acids or alkalis.
<b>Hazardous Decomposition Products</b>	None known.

## Section 11: TOXICOLOGICAL INFORMATION

### Acute Effects:

<b>Swallowed</b>	Toxic if swallowed. LD <sub>50</sub> (rat) 135mg/kg (chlorpyrifos). Amounts as single exposure swallowed incidental to normal handling are unlikely to cause injury. Ingestion of relatively large amounts may cause injury. Possible symptoms of exposure include nausea, vomiting and central nervous system depression. If aspirated into the lung may cause chemical pneumonitis or pulmonary oedema.
<b>Dermal</b>	Toxic if in contact with skin. LD <sub>50</sub> (rat) >2000mg/kg (chlorpyrifos) The concentrate may cause defatting of the skin, dermatitis and skin irritation on prolonged contact. May cause sensitisation from prolonged contact
<b>Inhalation</b>	Toxic if inhaled. LD <sub>50</sub> (rat) (4hr) >0.2mg/l (chlorpyrifos). When applying this product avoid inhalation of spray mist. Breathing in high concentrations of vapour can produce central nervous system depression leading to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.
<b>Eye</b>	Causes severe eye irritation.
<b>Skin</b>	Causes mild skin irritation.

### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	May be fatal if swallowed and enters airways.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Causes damage to organs through prolonged or repeated exposure. Regular exposure may result in lowering of cholinesterase activity.

## Section 12: ECOLOGICAL INFORMATION

HSNO Classes:	9.1A = Very toxic aquatic life. 9.2B = Toxic to the soil environment. 9.3A = Very toxic to terrestrial vertebrates. 9.4A = Very toxic to terrestrial invertebrates.
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### Product:

<b>Persistence and degradability</b>	In soil chlorpyrifos is slowly degraded with a half-life of ca. 60-120 days, to 3,5,6-trichloropyridin-2-ol, which is subsequently degraded to organochlorine compounds and carbon dioxide.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	Avoid unintended release into streams and waterways.

### Ecotoxicity:

**Acute Toxicity (fish)** (chlorpyrifos)  
 LC<sub>50</sub> (bluegill sunfish) (96hr) 0.002mg/L  
**Very ecotoxic in the aquatic environment**

**Acute Toxicity (birds)**  
 LD<sub>50</sub> (chicken) 32-102mg/kg  
**Very toxic to terrestrial vertebrates**

**Acute Toxicity (bees)**  
 LD<sub>50</sub> (contact) 0.07ug  
 LD<sub>50</sub> (oral) 0.36ug  
**Very toxic to terrestrial invertebrates**

## Section 13: DISPOSAL INFORMATION

Disposal Method:	Triple rinse container and add rinsate to the spray tank. Dispose of product only by using in accordance with label directions, or through Agrecovery Chemical Recovery Service or alternative approved programs.
Container Disposal:	 Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues and have an intact legible label may be taken to an Agrecovery collection site for free recycling. Otherwise crush and bury in an approved landfill. Do not burn. Do not use container for any other purpose.
Precautions or methods to avoid:	Do not allow product or empty container to contaminate any waterway.

## Section 14: TRANSPORT INFORMATION

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



### Road, Rail, Sea and Air Transport

UN No	3018
Class - Primary	6.1
Packing Group	III
Proper Shipping Name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (chlorpyrifos, 50%)
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

## Section 15: REGULATORY INFORMATION

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code:	HSR000224
HSNO Classification:	3.1D, 6.1C(oral, dermal, inh), 6.1E(asp), 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2B, 9.3A, 9.4A

HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (6.1C, 9.1A)
Secondary Containment (Schedule 5)	100L (6.1C, 9.1A)
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	1000L (6.1C)

### HSNO Additional Controls (Restrictions of use)

77A -	The substance must not be applied onto or into water.
CONTROL R-3: Application parameters	(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.
CONTROL R-4: 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.
CONTROL R-11: Notification	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).

### Hazardous Property Controls Notice 2017

HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances

HPC Notice Part 4 Subpart C	Qualifications required for applications of class 9 pesticides.
HPC Notice Part 2	Certain substances restricted to workplaces only.
HPC Notice Part 3	Hazardous substances in a place other than a workplace.
<b>ACVM Act and Regulations</b>	
See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions	<b>P8457</b>

## Section 16: OTHER INFORMATION

### Glossary

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

#### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

#### Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact Ravensdown, if further information is required.

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