

**Product name:** Tordon® Brushkiller XT**Issue Date:** 14.05.2025

CORTEVA AGRISCIENCE NEW ZEALAND LIMITED encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of New Zealand and may not meet the regulatory requirements in other countries.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** Tordon® Brushkiller XT**Identified uses:** End use herbicide**COMPANY IDENTIFICATION**

CORTEVA AGRISCIENCE NEW ZEALAND LIMITED

Private Bag 2017

NEW PLYMOUTH 4342

NEW ZEALAND

**Customer Information Number:**

0800-803-939

[NZCustomerservice@corteva.com](mailto:NZCustomerservice@corteva.com)**EMERGENCY TELEPHONE NUMBER****24-Hour Emergency Contact:** +64 6 751 2407**Local Emergency Contact:** 0800 844 455**For medical advice, contact the New Zealand Poisons Information Centre:**

0800 POISON (0800 764 766)

**Transport Emergency Only Dial:** 111

This SDS may not provide exhaustive guidance for all the controls assigned to this substance. The NZ EPA website [www.epa.govt.nz](http://www.epa.govt.nz) should be consulted for a full list of triggered controls and cited regulations

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## 2. HAZARDS IDENTIFICATION

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**Hazard classification**

NEW ZEALAND HAZARDOUS SUBSTANCES CLASSIFICATION: Classified as hazardous according to criteria in the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Notice 2017, and the Hazardous Substances (Classification) Notice 2017. Refer to Section 15 for EPA Approval Number.

**GHS classifications:**

Flammable liquid - Category 4

Acute oral toxicity - Category 4

Eye irritation - Category 2

Skin sensitisation - Category 1

Specific target organ toxicity (repeated exposure) - Category 2

Hazardous to the aquatic environment acute - Category 1  
Hazardous to the aquatic environment chronic - Category 1  
Hazardous to soil organisms  
Hazardous to terrestrial vertebrates

**Hazard pictograms**



Signal word: **WARNING!**

**Hazards**

Combustible liquid  
Harmful if swallowed  
Causes skin irritation.  
May cause an allergic skin reaction  
Causes serious eye irritation.  
May cause damage to organs (Kidney. Liver. Gastrointestinal tract) through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects  
Very toxic to the soil environment  
Harmful to terrestrial vertebrates

**Prevention**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Read label before use.  
Do not breathe fumes/vapours/spray  
Use only outdoors or in a well-ventilated area.  
Do not eat, drink or smoke when using this product  
Wear protective gloves/ protective clothing/ eye and face protection  
Wash skin thoroughly after handling  
Contaminated clothing should not be allowed out of the workplace.

**Response**

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth.  
Specific treatment – Rinse skin with soap and water. See Section 4: First Aid.  
Wash contaminated clothing before re-use.  
IF ON SKIN: Wash with plenty of soap and water. Specific treatment, see Section 4: First Aid.  
If skin irritation occurs: Get medical advice/attention.  
IF IN EYES: 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.  
Get medical advice if you feel unwell.  
Take off contaminated clothing and wash before re-use.  
Collect spillage.

**Storage**

Store in a well-ventilated place. Keep cool  
Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CASRN	Concentration
Triclopyr-2-butoxyethyl ester	64700-56-7	36.0 %
Picloram	1918-02-1	8.7 %
Hexyloxypropylamine	16728-61-3	5 - 10 %

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### 4. FIRST AID MEASURES

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Consult the National Poisons Information Centre (0800 POISON (0800 764 766)) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately.

**Description of first aid measures**

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

**Skin contact:** Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before re-use. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

**Eye contact:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses after the first 5 minutes, then continue rinsing eyes. Call a poison control centre or doctor for treatment advice. Suitable emergency eye wash facility should be available in the work area.

**Ingestion:** No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Skin contact may aggravate pre-existing dermatitis. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control centre or doctor, or going for treatment.

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## 5. FIREFIGHTING MEASURES

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**Hazchem code:** ●3Z

**Suitable extinguishing media:** Water spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Alcohol resistant foams (ATC type). General purpose synthetic foams (including AFFF) or protein foams may function but will be less effective.

**Unsuitable extinguishing media:** No data available

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent stream generation or eruption may occur upon application of direct water stream to hot liquids.

**Advice for firefighters**

**Fire Fighting Procedures:** Evacuate area. Move containers from fire area if this is possible without hazard. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Do not use direct water stream as it may spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (includes fire-fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire-fighting operations. If contact is likely, change to full chemical resistant fire-fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7: Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8: Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12: Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labelled containers. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, recovered material should be stored in a vented

container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurisation of the container. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. See Section 13, Disposal Considerations, for additional information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Handle in accordance with good industrial hygiene and safety practice. Keep away from heat, sparks and flame. Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Keep out of reach of children. Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Avoid breathing vapour or mist. Do not swallow. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

**This substance is subject to a requirement for an emergency management plan, secondary containment and signage, whenever it is held in quantities of 100 L or more, either alone or in aggregate with other hazardous substances. See Hazardous Substances Emergency Management and Identification Regulations.**

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m <sup>3</sup> Skin, DSEN, BEI
Picloram	Dow IHG	TWA	10 mg/m <sup>3</sup>
	NZ OEL	WES-TWA	10 mg/m <sup>3</sup>
Aminopyralid	Dow IHG	TWA	10 mg/m <sup>3</sup>
Diethylene glycol monoethyl ether	US WEEL	TWS	25ppm

### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields).

**Hand protection:** Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater

than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to AS/NZS 2161.10) is recommended.

**NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/ specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

**Other Information:** Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:

AS/NZS 1336: Recommended practices for occupational eye protection.

AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.

AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.

AS/NZS 2161: Occupational protective gloves.

AS/NZS 2210: Occupational protective footwear.

AS/NZS 4501: Occupational protective clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance - Physical state</b>	Liquid.
<b>- Colour</b>	Brown
<b>Odour</b>	Ester
<b>Odour Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting point/range</b>	Not applicable
<b>Freezing point</b>	No test data available
<b>Boiling point (760 mmHg)</b>	200°C
<b>Flash point - closed cup</b>	82°C
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapour Pressure</b>	No data available
<b>Relative Vapour Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	No data available
<b>Water solubility</b>	Emulsifiable.
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Dynamic Viscosity</b>	No data available

<b>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Liquid density</b>	1.148 g/ml
<b>Molecular weight</b>	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Thermally stable at recommended temperatures and pressures.

**Possibility of hazardous reactions:** Stable under recommended storage conditions.

**Conditions to avoid:** Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible materials:** Avoid contact with: Acids. Bases. Oxidizers.

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## 11. TOXICOLOGICAL INFORMATION

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### Acute toxicity

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. For similar material(s): LD50, Rat, male and female, > 2,000 mg/kg. No deaths occurred at this concentration.

Triclopyr-2-butoxyethyl ester: LD50, Rat, male and female, 500 mg/kg. OECD Test Guideline 423.

Picloram: LD50, Rat, male, > 5,000 mg/kg. LD50, Rat, female 4,012 mg/kg. Signs and symptoms of excessive exposure may include: Convulsions.

Hexyloxypropylamine: LD50 (Rat): 980 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

For similar material(s): LD50, Rat, male and female, > 4,000 mg/kg. No deaths occurred at this concentration.

Triclopyr-2-butoxyethyl ester: LD50, Rabbit > 2,000 mg/kg. No deaths occurred at this concentration.

LD50, Rat > 5,000 mg/kg. The substance has no acute dermal toxicity.

Picloram: LD50 (Rabbit): > 2,000 mg/kg. The substance has no acute dermal toxicity.

#### Acute inhalation toxicity

Prolonged excessive exposure to mist may cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

Triclopyr-2-butoxyethyl ester: LC50, 4 hour, dust/mist > 4.8 mg/L. The LC50 value is greater than the Maximum Attainable Concentration. Prolonged exposure is not expected to cause adverse effects.

Based on the available data, respiratory irritation was not observed. The substance has no acute inhalation toxicity.

Picloram: LC50, 4 hour, dust/mist > 0.035 mg/L. Maximum attainable concentration. No deaths occurred at this concentration. The substance has no acute inhalation toxicity. Vapours are unlikely

due to physical properties. Prolonged excessive exposure to dust may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Hexyloxypropylamine: Excessive exposure may cause severe irritation to the upper respiratory tract (nose and throat). The LC50 has not been determined

**Skin corrosion/irritation**

Product: Brief contact may cause mild skin irritation.  
Triclopyr-2-butoxyethyl ester: Rabbit: No skin irritation.  
Hexyloxypropylamine: Causes burns.

**Serious eye damage/eye irritation**

Product: May cause moderate eye irritation. May cause slight corneal injury.  
Triclopyr-2-butoxyethyl ester: Rabbit: No eye irritation.  
Hexyloxypropylamine: Corrosive.

**Sensitisation**

Triclopyr-2-butoxyethyl ester: Guinea pig: The product is a skin sensitiser, sub-category 1B.  
Picloram: Guinea pig: Does not cause skin sensitisation.

For respiratory sensitization: No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Product: Evaluation of available data suggests that this material is not an STOT-SE toxicant.  
Triclopyr-2-butoxyethyl ester: Evaluation of available data suggests that this material is not an STOT-SE toxicant.  
Hexyloxypropylamine: Available data are inadequate to determine single exposure specific target organ toxicity.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Product: Evaluation of available data suggests that this material is not an STOT-RE toxicant.  
Triclopyr-2-butoxyethyl ester: In animals, effects have been reported on the following organs: Kidney. Liver. Gastrointestinal tract. May cause damage to organs through prolonged or repeated exposure.  
Hexyloxypropylamine: No relevant data found.

**Carcinogenicity**

Triclopyr-2-butoxyethyl ester: For similar active ingredient(s). Triclopyr. Did not cause cancer in laboratory animals.  
Picloram. Did not cause cancer in laboratory animals.  
For the solvent(s): Did not cause cancer in laboratory animals.  
Hexyloxypropylamine: Did not cause cancer in laboratory animals.

**Reproductive toxicity**

Triclopyr-2-butoxyethyl ester: For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.  
Picloram. In animal studies, did not interfere with reproduction. Did not cause birth defects or other effects in the foetus even at doses which caused toxic effects in the mother.

**Mutagenicity**

Triclopyr-2-butoxyethyl ester: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.  
Picloram: In vitro tests did not show mutagenic effects.

Hexyloxypropylamine: For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

#### Aspiration Hazard

Product: Based on physical properties, not likely to be an aspiration hazard.

Triclopyr-2-butoxyethyl ester: Based on physical properties, not likely to be an aspiration hazard.

Picloram: Based on physical properties, not likely to be an aspiration hazard.

Hexyloxypropylamine: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

#### Triclopyr-2-butoxyethyl ester

##### Acute toxicity to fish

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, *Lepomis macrochirus* (Bluegill sunfish), flow-through test, 96 Hour, 0.36 mg/L

LC50, Fish, 96 Hour, 0.310 mg/l

##### Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), 48 Hour, 2.9 mg/L, OECD Test Guideline 202

##### Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, Growth rate inhibition, > 3.00 mg/L, OECD Test Guideline 201

ErC50, *Myriophyllum spicatum*, 14 d, 0.0473 mg/L

NOEC, *Myriophyllum spicatum*, 14 d, 0.00722 mg/L

M-Factor (acute aquatic toxicity): 10

##### Chronic toxicity to fish

NOEC, Rainbow trout (*Oncorhynchus mykiss*), 0.0263 mg/L

##### Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna* (Water flea), 21 d, number of offspring, 1.6 mg/L

LOEC, *Daphnia magna* (Water flea), 21 d, number of offspring, 5.1 mg/L

MATC (Maximum Acceptable Toxicant Level), *Daphnia magna* (Water flea), 21 d, number of offspring, 2.9 mg/L

M-Factor (chronic aquatic toxicity): 10

##### Toxicity to Above Ground Organisms

Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2,000 mg/kg).

Oral LD50, *Colinus virginianus* (Bobwhite quail), 21 d, 735 mg/kg bodyweight.

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5,000 ppm).

Dietary LC50, *Colinus virginianus* (Bobwhite quail), 8 d, 1890 mg/kg diet.

Oral LD50, *Apis mellifera* (bees), 48 Hour, mortality, > 110 µg/bee

Contact LD50, *Apis mellifera* (bees), 48 Hour, mortality, > 100 µg/bee

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 14 d, > 1,042 mg/kg

**Picloram****Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 8.8 mg/L

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 44.2 mg/L

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 78.7 mg/L

EC50, Lemna gibba, Growth inhibition, 14 d, 102 mg/L

ErC50, Myriophyllum spicatum, 14 d, 0.558 mg/L

NOEC, Myriophyllum spicatum, 14 d, 0.0095 mg/L

M-Factor (acute aquatic toxicity): 1

**Chronic toxicity to fish**

Rainbow trout (Oncorhynchus mykiss), flow-through test, 70 d, 0.55 mg/L

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), static test, 21 d, number of offspring, 6.79 mg/L

LOEC, Daphnia magna (Water flea), static test, 21 d, number of offspring, 13.5 mg/L

MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), static test, 21 d, number of offspring, 9.57 mg/L

M-Factor (chronic aquatic toxicity): 10

**Toxicity to bacteria**

EC50, activated sludge, 3 Hour, > 100 mg/L

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 14 d, survival, > 5,000 mg/kg

**Toxicity to Above Ground Organisms**

Material is practically non-toxic to birds on an acute basis (LD50 > 2,000 mg/kg).

Oral LD50, Anas platyrhynchos (Mallard duck), 14 d, > 2,510 mg/kg bodyweight.

Material is practically non-toxic to birds on a dietary basis (LC50 > 5,000 ppm).

Dietary LC50, Anas platyrhynchos (Mallard duck), > 5,000 mg/kg diet.

Contact LD50, Apis mellifera (bees), 48 Hour, > 100 micrograms/bee

Oral LD50, Apis mellifera (bees), 48 d, > 74 micrograms/bee

**Persistence and degradability****Triclopyr-2-butoxyethyl ester**

**Biodegradability:** Chemical degradation (hydrolysis) is expected in the environment. Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

**Biodegradation:** 18 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301B or Equivalent

**Biochemical Oxygen Demand (BOD):** 0.004 kg/kg  
**Theoretical Oxygen Demand:** 1.39 mg/mg  
**Stability in Water (1/2-life):** Hydrolysis, half-life, 8.7 d, pH 7 Half-life Temperature 25 °C

**Photodegradation**  
**Atmospheric half-life:** 5.6 Hour  
**Method:** Estimated.

#### Picloram

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.  
10-day Window: Fail

**Biodegradation:** 1.95 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301

**Stability in Water (1/2-life)**  
Hydrolysis, half-life, > 1.8 year, pH 5 - 9, Half-life Temperature 45 °C, Measured

**Photodegradation**  
**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 12.5 Hour

#### **Bioaccumulative potential**

##### Triclopyr-2-butoxyethyl ester

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3,000 or Log Pow between 3 and 5).  
**Partition coefficient: n-octanol/water (log Pow):** pH 7. 4.62  
**Bioconcentration factor (BCF):** 110 Fish

##### Picloram

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).  
**Partition coefficient: n-octanol/water (log Pow):** -1.92  
**Bioconcentration factor (BCF):** Lepomis macrochirus (Bluegill sunfish): 0.54

##### Hexyloxypropylamine

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).  
**Partition coefficient: n-octanol/water (log Pow):** 4 Estimated.  
**Bioconcentration factor (BCF):** 10 Fish Estimated.

#### **Mobility in Soil**

##### Triclopyr-2-butoxyethyl ester

Calculation of meaningful sorption data was not possible due to very rapid degradation in the soil.

For the degradation product: Triclopyr. Potential for mobility in soil is very high (Koc between 0 and 50).

Stability in soil: Aerobic degradation dissipation time: 144 – 1,248 hours.

**Picloram**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient** (Koc): 35

Stability in soil: Aerobic degradation dissipation time: 167 - 513 hours. Measured.

Anaerobic degradation dissipation time: > 300 hours. Measured.

**Hexyloxypropylamine**

Potential for mobility in soil is medium (Koc between 150 and 500).

**Partition coefficient** (Koc): 217.7 Estimated.

**Results of PBT and vPvB assessment****Triclopyr-2-butoxyethyl ester**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Picloram**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Hexyloxypropylamine**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Ozone depletion potential****Triclopyr-2-butoxyethyl ester**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Picloram**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Hexyloxypropylamine**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Waste handling, treatment and disposal practices must be in compliance with the New Zealand Hazardous Substances (Disposal) Notice 2017. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Regulations concerning waste management may vary in different locations.

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## 14. TRANSPORT INFORMATION

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**PUBLIC PASSENGER VEHICLE TRANSPORT: To be transported ONLY in the sealed original container.**

**Maximum amount permitted to be transported in a passenger vehicle: 100 mL**

### International Regulations

#### UNRTDG

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr-2-butoxyethyl Ester, Picloram)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 Environmentally hazardous : no

#### IATA-DGR

UN/ID No. : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr-2-butoxyethyl Ester, Picloram)  
 Class : 9  
 Packing group : III  
 Labels : Miscellaneous  
 Packing instruction (cargo aircraft) : 964  
 Packing instruction (passenger aircraft) : 964

#### IMDG-Code

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr-2-butoxyethyl Ester, Picloram)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 EmS Code : F-A, S-F  
 Marine pollutant : no  
 Remarks : Stowage category A

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### ADG

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr-2-butoxyethyl Ester, Picloram)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 Hazchem Code : •3Z  
 Environmentally hazardous : No

**Matters needing attention for transportation**

Marine Pollutants in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code and IATA special provision A197. If the product meets these special provisions, it may be shipped in New Zealand as a non-dangerous goods under provisions in NZS 5433 code which accepts IMDG and IATA classification.

This information is not intended to convey all specific regulatory or operational requirements/ information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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**ACVMG APPROVAL NUMBER:** P7545

**EPA Approval Code:** HSR007630

**ADVICE TO PRODUCT USERS REGARDING GHS CONTROLS:** Users of this product should make reference to the New Zealand Hazardous Substances and New Organisms Act and Regulations, and the Health and Safety at Work Act for relevant risk management controls. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Refer to Environment Protection Authority for more information <http://www.epa.govt.nz>

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## 16. OTHER INFORMATION

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**Revision**

Identification Number: 101205028 / A157 / Issue Date: 15.05.2025 / Version: Replaces 11.10.2021

**Sections amended:** All

**Legend**

ACGIH	American Conference of Governmental Industrial Hygienists
Corteva OEL	Corteva Occupational Exposure Limit
NZ OEL	New Zealand Workplace Exposure Standards for Atmospheric Contaminants
Skin, DSEN, BEI	Absorbed via Skin, Skin Sensitizer, Biological Exposure Indices
STEL	Short term exposure limit
TWA	8-hr Time weighted average
US WEEL	USA. Workplace Environmental Exposure
WES-TWA	Workplace Exposure Standard – Time weighted average

**Full text of other abbreviations****Full text of other abbreviations**

AIIIC - Australian Inventory of Industrial Chemicals; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; ECx - Concentration associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a

test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - not otherwise specified; NOEC - Non-Observed Effective Concentration; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; (Q)SAR - (Quantitative) Structure Activity Relationship; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDS - Safety Data Sheet; UN - United Nations.

CORTEVA AGRISCIENCE NEW ZEALAND LIMITED urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDS's, we are not and cannot be responsible for SDS's obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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