

**Product name:** TORDON® 75-D Herbicide**Issue Date:** 14.09.2021

CORTEVA AGRISCIENCE AUSTRALIA PTY LTD 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.

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**SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY**

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**Product name:** Tordon® 75-D Herbicide**Recommended use of the chemical and restrictions on use****Identified uses:** End use herbicide product**COMPANY IDENTIFICATION**

CORTEVA AGRISCIENCE AUSTRALIA PTY LTD  
LEVEL 9, 67 ALBERT AVENUE  
CHATSWOOD NSW 2067  
AUSTRALIA

**Customer Information Number:**

1800-700-096

aucustomerservice@corveva.com

**EMERGENCY TELEPHONE NUMBER****24-Hour Emergency Contact:** +61 2 9474 7350**Local Emergency Contact:** 1800-370-754**For advice, contact a doctor (at once) or the Australian Poisons Information Centre:** 131 126**Transport Emergency Only Dial** 000

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**SECTION 2: HAZARD(S) IDENTIFICATION**

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**GHS Classification**

Serious eye damage/eye irritation - Category 1

Skin sensitisation - Category 1

Acute aquatic toxicity - Category 2

Chronic aquatic toxicity - Category 2

**GHS label elements****Hazard pictograms**Signal word: **DANGER!**

**Hazard statements**

May cause an allergic skin reaction.  
 Causes serious eye damage.  
 Toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Avoid release to the environment.  
 Wear protective gloves/ eye protection/ face protection.

**Response**

IF ON SKIN: Wash with plenty of soap and water.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
 If skin irritation or rash occurs: Get medical advice/ attention.  
 Wash contaminated clothing before re-use.  
 Collect spillage.

**Disposal**

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

**Other hazards**

No data available

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**SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS, IN ACCORDANCE WITH SCHEDULE 8**


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This product is a mixture.

Component	CASRN	Concentration
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt	18584-79-7	47.19%
Picloram triisopropanolamine salt	6753-47-5	6.32 %
Alkylphenol alkoxyate	69029-39-6	3.0 – 10.0 %
Triisopropanolamine	122-20-3	3.0 - 10.0 %
2,6-Dichlorophenoxyacetic Acid	575-90-6	0.1 – 0.3 %
4-Chlorophenoxyacetic Acid	122-88-3	0.1 – 0.3 %
Balance	Not available	25.89 – 40.29 %

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**SECTION 4: FIRST AID MEASURES**


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**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:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

**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:** Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. 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 center or doctor, or going for treatment.

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## **SECTION 5: FIREFIGHTING MEASURES**

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**Hazchem Code:** ●3Z

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. 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 chloride. Carbon dioxide. Carbon monoxide.

**Unusual Fire and Explosion Hazards:** No data available.

#### **Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Burning liquids may be extinguished by dilution with water. 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 (M)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). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## SECTION 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. 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.

**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 labeled containers. Large spills: Contact Corteva Agriscience for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

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## SECTION 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

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**Precautions for safe handling:** Keep out of reach of children. Do not swallow. 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. Avoid contact with eyes, skin, and clothing. Avoid breathing vapour or mist. Avoid prolonged or repeated contact with skin. 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.

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## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

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### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Alkylphenol alkoxyate	Dow IHG	TWA	2 mg/m <sup>3</sup>
Triisopropanolamine	Dow IHG	TWA	10 mg/m <sup>3</sup>

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.

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit

requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

**Eye/face protection:** Use chemical goggles.

#### Skin protection

**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: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapour cartridge with a particulate pre-filter.

**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: Eye and face protection – Guidelines.

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 Set

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Brown
<b>Odour</b>	Odourless to mild
<b>Odour Threshold</b>	No data available
<b>pH</b>	6.8 100%
<b>Melting point/range</b>	Not applicable to liquids
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	100 °C
<b>Flash point - closed cup</b>	> 100 °C <i>Closed Cup</i>

<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>	0.014 mmHg at 20 °C
<b>Relative Vapour Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	1.185 at 20 °C
<b>Water solubility</b>	Soluble
<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>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Liquid Density</b>	1.2 g/cm <sup>3</sup> at 20 °C
<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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## SECTION 10: STABILITY AND REACTIVITY

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose.

**Incompatible materials:** Avoid contact with: Oxidizers. Strong acids. Strong bases.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product: Single dose oral LD50 has not been determined.  
Based on information for component(s): LD50, Rat, 2,200 mg/kg Estimated.

**Acute dermal toxicity**

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

As product: The dermal LD50 has not been determined.  
Based on information for component(s): LD50, Rabbit, > 5,000 mg/kg Estimated.

**Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially non-irritating to skin.

Prolonged contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation**

May cause severe eye irritation.

May cause corneal injury.

May cause permanent impairment of vision.

**Sensitization**

For the active ingredient(s): Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

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

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

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

For the active ingredient(s): In animals, effects have been reported on the following organs: Liver.

Kidney. Eye. Thyroid.

For the minor component(s): In animals, effects have been reported on the following organs: Kidney.  
Liver.

**Carcinogenicity**

For similar active ingredient(s). Picloram. Did not cause cancer in laboratory animals. There is no evidence of carcinogenicity in laboratory animal toxicity studies. While some epidemiological studies report a positive association between 2,4-D exposure and cancer, a weight of evidence analysis of the epidemiology data across studies reveals no indication that 2,4-D causes cancer in humans.

**Teratogenicity**

For the active ingredient(s): 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt Has caused birth defects in laboratory animals only at doses producing severe toxicity in the mother. Has been toxic to the foetus in laboratory animals at doses toxic to the mother.

For similar active ingredient(s). Did not cause birth defects or other effects in the foetus even at doses which caused toxic effects in the mother.

**Reproductive toxicity**

For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring.

For similar active ingredient(s). Picloram. In animal studies, did not interfere with reproduction.

For the minor component(s): Studies in laboratory animals indicate that diethylene glycol monoethyl ether (DEGEE) is not a reproductive toxicant even when given in large amounts (a few percent in the drinking water). However, at the highest doses, it caused some toxic effects in offspring of treated animals: increased liver weight, decreased brain weight, reduced sperm motility.

#### **Mutagenicity**

For the active ingredient(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

#### **Aspiration Hazard**

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

#### **COMPONENTS INFLUENCING TOXICOLOGY:**

##### **2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

###### **Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

LC50, Rat, male, 4 Hour, dust/mist, > 0.84 mg/l

Maximum attainable concentration. No deaths occurred at this concentration.

##### **Picloram triisopropanolamine salt**

###### **Acute inhalation toxicity**

Vapours are unlikely due to physical properties. No adverse effects are anticipated from single exposure to dust. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

LC50, Rat, 4 Hour, Aerosol, > 0.07 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

##### **Alkylphenol alkoxyate**

###### **Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material or mist may cause respiratory irritation and other effects.

As product: The LC50 has not been determined

##### **Triisopropanolamine**

###### **Acute inhalation toxicity**

Rat, 8 Hour, No deaths occurred following exposure to a saturated atmosphere.

##### **2,6-Dichlorophenoxyacetic Acid**

###### **Acute inhalation toxicity**

For similar material(s): Maximum attainable concentration. LC50, Rat, 4 Hour, Dust/mist, > 1.79 mg/l No deaths occurred at this concentration.

##### **4-Chlorophenoxyacetic Acid**

###### **Acute inhalation toxicity**

LC50, Rat, Dust, > 5.25 mg/l

**Balance****Acute inhalation toxicity**

The LC50 has not been determined.

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**SECTION 12: ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**Ecotoxicity****2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 317 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, *Daphnia magna* (Water flea), static test, 48 Hour, 748 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (green algae), 5 d, 103 mg/l

EC50, *Lemna minor* (duckweed), 14 d, 2.37 mg/l

**Toxicity to Above Ground Organisms**

Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg).

Oral LD50, *Colinus virginianus* (Bobwhite quail), 405 mg/kg

Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Dietary LC50, *Colinus virginianus* (Bobwhite quail), > 5,620 ppm

**Picloram triisopropanolamine salt****Acute toxicity to fish**

Based on information for a similar material: 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, 51 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, *Daphnia magna* (Water flea), static test, 48 Hour, 125 mg/l

**Acute toxicity to algae/aquatic plants**

Based on information for a similar material: ErC50, *Myriophyllum spicatum*, 14 d, 0.558 mg/l

Based on information for a similar material: NOEC, *Myriophyllum spicatum*, 14 d, 0.0095 mg/l

**Chronic toxicity to fish**

NOEC, *Pimephales promelas* (fathead minnow), 28 d, 7.19 mg/l

**Alkylphenol alkoxylate****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Lepomis macrochirus* (Bluegill sunfish), static test, 96 Hour, 4.8 mg/l, OECD Test Guideline 203 or Equivalent

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 3.7 mg/l, OECD Test Guideline 203 or Equivalent

#### **Acute toxicity to aquatic invertebrates**

LC50, *Daphnia magna* (Water flea), 48 Hour, 10.5 mg/l, OECD Test Guideline 202 or Equivalent

#### **Toxicity to Above Ground Organisms**

Dietary LC50, *Apis mellifera* (bees), 2 d, > 105 micrograms/bee

Contact LD50, *Apis mellifera* (bees), 2 d, > 100 micrograms/bee

No Observed Effects Level (NOEL), *Colinus virginianus* (Bobwhite quail), 2,250 mg/kg

Oral LD50, *Colinus virginianus* (Bobwhite quail), > 2,250 mg/kg

### **Triisopropanolamine**

#### **Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, *Leuciscus idus* (Golden orfe), static test, 96 Hour, 3,158.4 mg/l, DIN 38412

#### **Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 500 mg/l, OECD Test Guideline 202 or Equivalent

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

EC50, alga *Scenedesmus* sp., static test, 72 Hour, Growth rate inhibition, 710 mg/l, EU Method C.3 (Algal Inhibition test)

#### **Toxicity to bacteria**

EC10, activated sludge, 30 min, > 1,195 mg/l

### **2,6-Dichlorophenoxyacetic Acid**

#### **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).

For similar material(s): LC50, *Pimephales promelas* (fathead minnow), static test, 96 Hour, 133 - 320 mg/l

For similar material(s): LC50, *Poecilia reticulata* (guppy), static test, 96 Hour, 8.4 - 70.7 mg/l

#### **Acute toxicity to aquatic invertebrates**

For similar material(s): EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 25 - 262 mg/l

For similar material(s): LC50, stonefly *Pteronarcys californica*, static test, 96 Hour, 1.6 - 15 mg/l

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

For similar material(s): EC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, 24.2 mg/l

For similar material(s): EbC50, diatom *Navicula* sp., static test, 5 d, Biomass, 2.02 mg/l

For similar material(s): EC50, *Lemna gibba*, 14 d, 0.58 mg/l

Estimated.

ErC50, diatom *Navicula* sp., static test, 72 Hour, > 100 mg/l

**Chronic toxicity to fish**

NOEC, Pimephales promelas (fathead minnow), 32 d, growth, 63.4 mg/l

LOEC, Pimephales promelas (fathead minnow), 32 d, growth, 100.9 mg/l

MATC (Maximum Acceptable Toxicant Level), Pimephales promelas (fathead minnow), 32 d, growth, 80 mg/l

**Chronic toxicity to aquatic invertebrates**

For similar material(s): NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 46.2 mg/l

**4-Chlorophenoxyacetic Acid****Acute toxicity to fish**

Based on information for a similar material: 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).

For similar material(s): LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 133 - 320 mg/l

For similar material(s): LC50, Poecilia reticulata (guppy), static test, 96 Hour, 8.4 - 70.7 mg/l

**Acute toxicity to aquatic invertebrates**

For similar material(s): EC50, Daphnia magna (Water flea), static test, 48 Hour, 25 - 262 mg/l

For similar material(s): LC50, stonefly Pteronarcys californica, static test, 96 Hour, 1.6 - 15 mg/l

**Acute toxicity to algae/aquatic plants**

For similar material(s): EC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, 24.2 mg/l

For similar material(s): EbC50, diatom Navicula sp., static test, 5 d, Biomass, 2.02 mg/l

For similar material(s): EC50, Lemna gibba, 14 d, 0.58 mg/l

Estimated.

ErC50, diatom Navicula sp., static test, 72 Hour, > 100 mg/l

**Chronic toxicity to fish**

NOEC, Pimephales promelas (fathead minnow), 32 d, growth, 63.4 mg/l

LOEC, Pimephales promelas (fathead minnow), 32 d, growth, 100.9 mg/l

MATC (Maximum Acceptable Toxicant Level), Pimephales promelas (fathead minnow), 32 d, growth, 80 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 46.2 mg/l

**Toxicity to Above Ground Organisms**

Based on information for a similar material: Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

**Balance****Acute toxicity to fish**

No relevant data found.

**Persistence and degradability****2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

**Biodegradability:** For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

**Picloram triisopropanolamine salt**

**Biodegradability:** For similar active ingredient(s). Picloram. 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.

**Alkylphenol alkoxyate**

**Biodegradability:** Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

**Theoretical Oxygen Demand:** 2.35 mg/mg

**Chemical Oxygen Demand:** 1.78 mg/mg

**Triisopropanolamine**

**Biodegradability:** Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Biodegradation rate may increase in soil and/or water with acclimation. Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**Theoretical Oxygen Demand:** 2.35 mg/mg

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 3 Hour

**Method:** Estimated.

**2,6-Dichlorophenoxyacetic Acid**

**Biodegradability:** Based on information for a similar material: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 99 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**4-Chlorophenoxyacetic Acid**

**Biodegradability:** Based on information for a similar material: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 99 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**Balance**

**Biodegradability:** No relevant data found.

**Bioaccumulative potential****2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high water solubility. For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Picloram triisopropanolamine salt**

**Bioaccumulation:** No data available for this product. For similar active ingredient(s). Picloram. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Alkylphenol alkoxyate**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high water solubility. May foam in water.

**Triisopropanolamine**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water log Pow):** -0.015 at 23 °C Measured

**Bioconcentration factor (BCF):** < 0.57 Fish 42 d Measured

**2,6-Dichlorophenoxyacetic Acid**

**Bioaccumulation:** For similar material(s): For similar material(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water (log Pow):** -0.83 Measured

**Bioconcentration factor (BCF):** 10 Fish 3 d

**4-Chlorophenoxyacetic Acid**

**Bioaccumulation:** For similar material(s): Based on information for a similar material: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water (log Pow):** -0.83

**Bioconcentration factor (BCF):** 10 Fish 3 d

**Balance**

**Bioaccumulation:** No relevant data found.

**Mobility in Soil****2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. Potential for mobility in soil is very high (Koc between 0 and 50).

**Picloram triisopropanolamine salt**

For similar active ingredient(s). Picloram. Potential for mobility in soil is very high (Koc between 0 and 50).

**Alkylphenol alkoxyate**

No data available.

**Triisopropanolamine**

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

**Partition coefficient (Koc):** 10 Estimated.

**2,6-Dichlorophenoxyacetic Acid**

For similar material(s):

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

**Partition coefficient (Koc):** 5 - 212 Measured

**4-Chlorophenoxyacetic Acid**

For similar material(s):

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

**Partition coefficient (Koc):** 5 - 212 Measured

**Balance**

No relevant data found.

**Results of PBT and vPvB assessment**

**2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

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 triisopropanolamine salt**

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

**Alkylphenol alkoxyate**

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

**Triisopropanolamine**

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).

**2,6-Dichlorophenoxyacetic Acid**

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).

**4-Chlorophenoxyacetic Acid**

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).

**Balance**

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

**Other adverse effects**

**2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

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

**Picloram triisopropanolamine salt**

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

**Alkylphenol alkoxyate**

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

**Triisopropanolamine**

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

**2,6-Dichlorophenoxyacetic Acid**

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

**4-Chlorophenoxyacetic Acid**

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

**Balance**

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

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## **SECTION 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.

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## **SECTION 14: TRANSPORT INFORMATION**

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**ADG**

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(2,4-D Salt, Picloram triisopropanolamine salt)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	2,4-D Salt, Picloram triisopropanolamine salt

**Classification for SEA transport (IMO-IMDG):**

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.( 2,4-D Salt, Picloram triisopropanolamine salt)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	2,4-D Salt, Picloram triisopropanolamine salt
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.( 2,4-D Salt, Picloram triisopropanolamine salt)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III

**Hazchem Code:** ●3Z

**Further information:**

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packaging's that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

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.

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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## SECTION 15: REGULATORY INFORMATION

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**Poison Schedule:** S5

**APVMA Approval Number:** 40487

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## SECTION 16: ANY OTHER RELEVANT INFORMATION

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**Revision**

Identification Number: 101191521 / A143 / Issue Date: 14.09.2021 / Replaces: 6.01.2021

DAS Code: IWD-4185

Sections amended: 5, 14

**Legend**

Dow IHG	Dow Industrial Hygiene Guideline
TWA	Time weighted average

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; 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; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System.

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