SAFETY DATA SHEET
CORTEVA AGRISCIENCE AUSTRALIA PTY LTD

Product name: Tordon® RegrowthMaster 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. actions.

SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product name: Tordon® RegrowthMaster 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@corteva.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

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification
Serious eye damage/eye irritation - Category 2A
Skin sensitisation - Category 1
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2
Acute aquatic toxicity - Category 1
Chronic aquatic toxicity - Category 1

GHS label elements
Hazard pictograms



Signal word: **WARNING!**

Hazard statements
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause damage to organs (Kidney) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements
Prevention
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid release to the environment.
Wear protective gloves/ eye protection/ face protection.

Response
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
Get medical advice/ attention if you feel unwell.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before re-use.
Collect spillage.

Storage
Store in a well-ventilated place. Keep container tightly closed.

Other hazards
No data available

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

Component	CASRN	Concentration
Aminopyralid Triisopropanolamine Salt	566191-89-7	4.16 %
Picloram triisopropanolamine salt	6753-47-5	15.52 %
Triclopyr Triethylamine Salt	57213-69-1	24.15 %
Alkylphenol alkoxylate	69029-39-6	< 5.0 %
Triethylamine	121-44-8	< 5.0 %
Triisopropanolamine	122-20-3	< 5.0 %
Ethylenediamine tetraacetic acid	60-00-4	< 5.0 %
Ethanol	64-17-5	< 5.0 %
Balance	Not available	≤ 41.27 %

SECTION 4: FIRST AID MEASURES

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, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

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: 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.

SECTION 5: FIREFIGHTING MEASURES

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 monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Dense smoke is produced when product burns.

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). 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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.

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

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

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Triclopyr Triethylamine Salt	Dow IHG	TWA	2 mg/m3 SKIN, DSEN, BEI
Alkylphenol alkoxylate	Dow IHG	TWA	2 mg/m3

Triethylamine	ACGIH	TWA	0.5 ppm SKIN
	ACGIH	STEL	1 ppm SKIN
	Dow IHG	TWA	1 ppm SKIN
	Dow IHG	STEL	3 ppm SKIN
	AU OEL	TWA	8 mg/m3 2 ppm
	AU OEL	STEL	17 mg/m3 4 ppm
Triisopropanolamine	Dow IHG	TWA	10 mg/m3
Ethylenediamine tetraacetic acid	Dow IHG	TWA	10 mg/m3
Ethanol	ACGIH	TWA	1,000 ppm
	ACGIH	STEL	1,000 ppm
	AU OEL	TWA	1,880 mg/m3 1,000 ppm

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: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: 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 vapor 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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Colour	Brown
Odour	Mild
Odour Threshold	No data available
pH	No test data available
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	>100 °C *Unspecified*
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapour Pressure	No test data available
Relative Vapour Density (air = 1)	No test data available
Relative Density (water = 1)	1.154 at 20 °C
Water solubility	No test data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Dynamic Viscosity	42.2 mPa.s at 20 °C 16.7 mPa.s at 40 °C
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No significant increase (>5C) in temperature.
Molecular weight	No data available

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

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No data available

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

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures.

Incompatible materials: Avoid contact with: Oxidizers.

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.

SECTION 11: TOXICOLOGICAL INFORMATION

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: LD50, Rat, female, > 2,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50, Rat, male and female, > 5,000 mg/kg

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: LC50, Rat, male and female, 4 Hour, dust/mist, > 5.09 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Brief contact is essentially non-irritating to skin.

Serious eye damage/eye irritation

May cause moderate eye irritation.
Corneal injury is unlikely.

Sensitization

Has demonstrated the potential for contact allergy in mice.
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: Gastrointestinal tract. Kidney. Liver.

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

Carcinogenicity
For similar active ingredient(s). Triclopyr. Aminopyralid. Picloram acid. Did not cause cancer in laboratory animals. The trisodium salt of EDTA did not cause cancer in laboratory animals.

Teratogenicity
For the active ingredient(s): Triclopyr triethylamine salt. Has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

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

For the minor component(s): Has caused birth defects in lab animals at high doses. EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation.

Reproductive toxicity
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.

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

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

For the minor component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative in some cases and positive in other cases. Most data indicate that EDTA and its salts are not mutagenic. Minimal effects reported are likely due to trace metal deficiencies resulting from chelating by EDTA.

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

SECTION 12: ECOLOGICAL INFORMATION

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

Ecotoxicity
Aminopyralid Triisopropanolamine Salt

Acute toxicity to fish
For similar material(s): 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).
For similar material(s): LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 360 mg/l

Acute toxicity to aquatic invertebrates
For similar material(s): EC50, Daphnia magna (Water flea), 48 Hour, > 460 mg/l

Acute toxicity to algae/aquatic plants

For similar material(s): ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 1,000 mg/l

Toxicity to Above Ground Organisms
Based on information for a similar material:
Material is practically non-toxic to birds on an acute basis (LD50 > 2,000 mg/kg).
Material is practically non-toxic to birds on a dietary basis (LC50 > 5,000 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 spicaturn, 14 d, 0.558 mg/l
Based on information for a similar material: NOEC, Myriophyllum spicaturn, 14 d, 0.0095 mg/l

Chronic toxicity to fish
NOEC, Pimephales promelas (fathead minnow), 28 d, 7.19 mg/l

Triclopyr Triethylamine Salt

Acute toxicity to fish
For similar material(s): 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, Cyprinus carpio (Carp), 96 Hour, 350 mg/l
LC50, Lepomis macrochirus (Bluegill sunfish), semi-static test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates
EC50, eastern oyster (Crassostrea virginica), static test, 48 Hour, 56 - 87 mg/l
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 448 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 107 mg/l
ErC50, blue-green alga Anabaena flos-aquae, Growth inhibition, 72 Hour, > 100 mg/l
EC50, Lemna gibba, Growth inhibition, 7 d, > 1,000 mg/l
Based on information for a similar material: ErC50, Myriophyllum spicaturn, 14 d, 0.241 mg/l
Based on information for a similar material: NOEC, Myriophyllum spicaturn, 14 d, 0.0191 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).
Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg).
Oral LD50, Colinus virginianus (Bobwhite quail), 300mg/kg bodyweight.
Dietary LC50, Colinus virginianus (Bobwhite quail), 11622mg/kg diet.

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

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

Triethylamine

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Rainbow trout (Oncorhynchus mykiss), flow-through test, 96 Hour, 36 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 17 mg/l, OECD Test Guideline 202 or Equivalent

Toxicity to bacteria
EC10, Pseudomonas putida, Static, 17 Hour, Growth inhibition, 71 mg/l
EC50, Pseudomonas putida, Static, 17 Hour, Growth inhibition, 95 mg/l

Chronic toxicity to fish
LOEC, Rainbow trout (Oncorhynchus mykiss), semi-static test, 60 d, mortality, > 100 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, mortality, 7.1 mg/l
LOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, mortality, 14 mg/l

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

Ethylenediamine tetraacetic acid

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, Fish, 96 Hour, 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 113 mg/l, OECD Test Guideline 202 or Equivalent

Ethanol

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, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 11,200 - 13,000 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 5,414 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EbC50, Skeletonema costatum (marine diatom), 5 d, Biomass, 10,943 - 11,619 mg/l, OECD Test Guideline 201 or Equivalent

Persistence and degradability

Aminopyralid Triisopropanolamine Salt

Biodegradability: For similar material(s): Aminopyralid. Material is not readily biodegradable according to OECD/EEC guidelines.

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.

Triclopyr Triethylamine Salt

Biodegradability: For similar active ingredient(s). Triclopyr. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).
For similar active ingredient(s). Triclopyr. 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.

Alkylphenol alkoxylate

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

Triethylamine

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).
10-day Window: Pass
Biodegradation: 96 %
Exposure time: 21 d
Method: OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
Biodegradation: 25 - 34 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Theoretical Oxygen Demand: 3.49 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.116 d
Method: Estimated.

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.

Ethylenediamine tetraacetic acid

Biodegradability: Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: 37 %
Exposure time: 14 d
Method: OECD Test Guideline 302B or Equivalent
10-day Window: Fail
Biodegradation: 0 %
Exposure time: 30 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.37 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 2.12 Hour
Method: Estimated.

Ethanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: > 70 %
Exposure time: 5 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 2.08 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 2.99 d
Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Aminopyralid Triisopropanolamine Salt

Bioaccumulation: For similar active ingredient(s). Aminopyralid. 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).

Triclopyr Triethylamine Salt

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

Alkylphenol alkoxylate

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

Triethylamine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water (log Pow): 1.45 Measured
Bioconcentration factor (BCF): < 4.9 Cyprinus carpio (Carp) 42 d Measured

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

Ethylenediamine tetraacetic acid
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water (log Pow): -3.86 at 25 °C Estimated.
Bioconcentration factor (BCF): 1.1 Fish 28 d Measured

Ethanol
Bioaccumulation: Bioaccumulation is unlikely. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water (log Pow): -0.31 Measured

Balance
Bioaccumulation: No relevant data found.

Mobility in Soil
Aminopyralid Triisopropanolamine Salt
For similar active ingredient(s). Aminopyralid. 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).

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

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

Alkylphenol alkoxylate
No data available.

Triethylamine
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 11 - 146 Estimated.

Triisopropanolamine
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 10 Estimated.

Ethylenediamine tetraacetic acid
Potential for mobility in soil is high (Koc between 50 and 150).
Partition coefficient (Koc): 98

Ethanol
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 1.0 Estimated.

Balance
No relevant data found.

Results of PBT and vPvB assessment
Aminopyralid 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).

Triclopyr Triethylamine 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).

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

Triethylamine
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).

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).

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

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

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

Other adverse effects
Aminopyralid Triisopropanolamine Salt
No relevant data found.

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

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

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

Triethylamine
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.

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

Ethanol
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.

SECTION 13: DISPOSAL CONSIDERATIONS

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.

This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste.

SECTION 14: TRANSPORT INFORMATION

ADG

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Triclopyr Triethylamine Salt, Alkylphenol alkoxylate)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Triclopyr Triethylamine Salt, Alkylphenol alkoxylate

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Triclopyr Triethylamine Salt, Alkylphenol alkoxylate)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Triclopyr Triethylamine Salt, Alkylphenol alkoxylate
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Triclopyr Triethylamine Salt, Alkylphenol alkoxylate)
UN number	UN 3082
Class	9
Packing group	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.

SECTION 15: REGULATORY INFORMATION

Poison Schedule: S6
APVMA Approval Number: 67378

SECTION 16: ANY OTHER RELEVANT INFORMATION

Revision
Identification Number: 101209049 / A143 / Issue Date: 14.09.2021 / Replaces: 6.1.2021
DAS Code: GF-2554
Sections amended: 5, 14

Legend

ACGIH	American Conference of Governmental Industrial Hygienists. Threshold Limit Values (TLV)
AU OEL	Australia. Workplace Exposure Standards for Airborne Contaminants.
Dow IHG	Dow Industrial Hygiene Guideline
SKIN	Absorbed via skin
SKIN, DSEN, BEI	Absorbed via Skin, Skin Sensitizer, Biological Exposure Indice
STEL	Short term exposure limit
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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