Product name: ACCESS® Herbicide **Issue Date:** 27.08.2025

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. This Safety Data Sheet adheres to the standards and regulatory requirements of Australia and may not meet the regulatory requirements in other countries.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: ACCESS® 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: 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: HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids - Category 4
Acute toxicity (oral) – Category 4
Skin corrosion/irritation - Category 2
Skin sensitisation - Category 1
Carcinogenicity - Category 2
Specific target organ toxicity - single exposure (central nervous system) - Category 3
Specific target organ toxicity - repeated exposure (kidney) - Category 2
Aspiration hazard - Category 1
Short-term (acute) aquatic toxicity - Category 1
Long-term (chronic) aquatic toxicity - Category 1

GHS label elements
Hazard pictograms

Signal word: **DANGER!**

Hazard statements
Combustible liquid.
Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May cause damage to organs (Kidney) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe mist/ vapours/ spray.
Wash skin thoroughly after handling
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before re-use.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Collect spillage.

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

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

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration % w/w
Triclopyr-2-butoxyethyl ester	64700-56-7	31.07 %
Picloram isooctyl esters	26952-20-5	16.36 %
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified.	64742-94-5	30.0 - 40.0 %
Naphthalene	91-20-3	3 – 10%
C10-16-Alkybenzene sulfonic acid	68584-22-5	0.1 – 0.3 %

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. If breathing is difficult, oxygen should be administered by qualified personnel.

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 reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.

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: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not 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: Maintain adequate ventilation and oxygenation of the patient. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. 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. Repeated excessive exposure may aggravate pre-existing lung disease. Skin contact may aggravate pre-existing dermatitis.

SECTION 5: FIREFIGHTING MEASURES

Hazchem Code: ●3Z

Suitable extinguishing media: Water spray. Dry chemical. Carbon dioxide. Foam. Alcohol resistant foams (ATC type) are preferred.

Unsuitable extinguishing media: Do not use direct water stream or high volume water jet.

Special hazards arising from the substance or mixture
Hazardous combustion products: Vapours may form explosive mixtures with air. Flash back possible over considerable distance. 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: Carbon oxides.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Keep upwind of spill. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent spreading over a wide area (e.g. by containment or oil barriers).
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. If the product contaminates rivers and lakes or drains inform respective authorities.

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. For large spills, provide dyking or other appropriate containment to keep material from spreading. 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-pressurization of the container. Collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal. See Section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Use with local exhaust ventilation which provides sufficient air exchange**.** Avoid formation of aerosol. Handle in accordance with good industrial hygiene and safety practice. Take precautionary measures against static discharges. Keep away from heat and sources of ignition. Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapour or mist. Avoid contact with eyes. Wash thoroughly after handling. 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. 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. Avoid storing near strong oxidising agents, explosives or gases.

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-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3 SKIN, DSEN, BEI
	Corteva OEL	STEL	6 mg/m3
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	Corteva OEL	TWA	100 mg/m3
	Corteva OEL	STEL	300 mg/m3
	ACGIH	TWA	200 mg/m3 (total hydrocarbon vapour)
Naphthalene	ACGIH	TWA	10 ppm SKIN
	Dow IHG	TWA	10 ppm SKIN
	Dow IHG	STEL	15 ppm SKIN
	AU OEL	TWA	52 mg/m3 10 ppm
	AU OEL	STEL	79 mg/m3 15 ppm
Further information: Category 2 (Carc. 2) Suspected human carcinogen			

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 engineering controls to maintain airborne level 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 chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

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, 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: 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	Aromatic
Odour Threshold	No data available
pH	No data available
Melting point/range	Not applicable to liquids
Freezing point	No data available
Boiling point (760 mmHg)	183 - 210 °C Solvent
Flash point - closed cup	73 °C
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	0.9 % vol *Literature*
Upper explosion limit	6.0 % vol *Literature*
Vapour Pressure	499.875 hPa at 38 °C Solvent
Relative Vapour Density (air = 1)	No data available

Relative Density (water = 1)	No data available
Water solubility	Insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Density	1.074 g/cm3
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 dangerous reaction known under conditions of normal use.

Chemical stability: Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions: Stable under recommended storage conditions.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

Incompatible materials: Avoid contact with: Acids. Bases. Oxidizing agents.

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 oxides. Hydrogen chloride gas. Nitrogen oxides. Toxic gases are released during decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity

Product: 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. Single dose oral LD50 has not been determined.

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

Picloram isooctyl esters: LD50, Rat, male and female: > 3,500 mg/kg. No deaths occurred at this concentration. The substance has no acute oral toxicity.

Solvent naphtha (petroleum), heavy arom.: LD50, Rat > 5,000 mg/kg.

Naphthalene: LD50 (Rat): > 2,000 mg/kg. Lethal Dose (Humans): 5 - 15 grams. Estimated.
Excessive exposure may cause haemolysis, thereby impairing the blood's ability to transport oxygen. Ingestion of naphthalene by humans has caused haemolytic anaemia. Toxicity from swallowing may be greater in humans than in animals. In humans, symptoms may include:
Confusion, lethargy, muscle spasms or twitches, convulsions, coma

C10-16-Alkylbenzene sulfonic acid: LD50, Rat > 1,350 mg/kg. OECD Test Guideline 401.

Acute dermal toxicity

Product: Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD50 has not been determined.

Triclopyr-2-butoxyethyl ester: LD50, Rabbit, > 2,000 mg/kg. No deaths occurred at this concentration. The substance has no acute dermal toxicity.

Picloram isooctyl esters: LD50 (Rabbit, male and female): > 2,000 mg/kg. No deaths occurred at this concentration. The substance has no acute dermal toxicity.

Solvent naphtha (petroleum), heavy arom.: LD50 (Rabbit): > 2,000 mg/kg. The substance has no acute dermal toxicity.

Naphthalene: LD50, Rat > 2,500 mg/kg. Human case reports suggest Naphthalene may be absorbed through the skin in toxic amounts, especially in children.

C10-16-Alkylbenzene sulfonic acid: LD50, Rat, 530 – 1,060 mg/kg.

Acute inhalation toxicity

As product: The LC50 has not been determined.

Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anaesthetic or narcotic effects; dizziness and drowsiness may be observed. Signs and symptoms of excessive exposure may include: Sweating. Nausea and/or vomiting.

Triclopyr-2-butoxyethyl ester: LC50, Rat, 4 hour, dust/mist > 4.8 mg/L. The LC50 value is greater than the Maximum Attainable Concentration. The substance has no acute inhalation toxicity.

Picloram isooctyl esters: LC50 (Rat, male and female): 4 h, dust/mist, > 0.35 mg/L. The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration. The substance or mixture has no acute inhalation toxicity. No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

Solvent naphtha (petroleum), heavy arom.: LC50, Rat, 6 hour, dust/mist, > 11.4 mg/L.

Naphthalene: LC50 (Rat): 4 hour, vapour > 0.41 mg/L. The LC50 value is greater than the Maximum Attainable Concentration. The substance has no acute inhalation toxicity. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and/or lung injury. Signs and symptoms of excessive exposure may include: Headache, confusion, sweating, nausea and/or vomiting.

Skin corrosion/irritation

Product: Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin.

Triclopyr-2-butoxyethyl ester: Rabbit: No skin irritation

Picloram isooctyl esters: Rabbit: Skin irritation

Naphthalene: Rabbit, 24h, No skin irritation.

C10-16-Alkylbenzene sulfonic acid: Causes severe burns. OECD Test Guideline 404.

Serious eye damage/eye irritation

Product: May cause moderate eye irritation. Corneal injury is unlikely. Vapour may cause eye irritation experienced as mild discomfort and redness.

Triclopyr-2-butoxyethyl ester: Rabbit. No eye irritation.

C10-16-Alkylbenzene sulfonic acid: Corrosive. OECD Test Guideline 405.

Sensitization

Triclopyr-2-butoxyethyl ester: Guinea pig. The product is a skin sensitizer sub-category 1B.

Picloram isooctyl esters: The product is a skin sensitizer sub-category 1B. Has caused allergic skin reactions when tested in guinea pigs.

Solvent naphtha (petroleum), heavy arom.: Did not cause an allergic skin reaction when tested in humans.

Naphthalene: Does not cause skin sensitisation. Skin contact may cause an allergic skin reaction in a small proportion of individuals. Did not cause allergic skin reactions when tested in guinea pigs.

C10-16-Alkylbenzene sulfonic acid: Did not cause skin sensitisation when tested in guinea pigs.

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.

Solvent naphtha (petroleum), heavy arom.: Inhalation – nervous system: May cause drowsiness or dizziness.

Naphthalene: Available data are inadequate to determine single exposure specific target organ toxicity.

C10-16-Alkylbenzene sulfonic acid: May cause respiratory irritation.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Triclopyr-2-butoxyethyl ester: May cause damage to organs through prolonged or repeated exposure: Kidney.

Picloram isooctyl esters: For similar active ingredients. Picloram acid: In animals, effects have been reported on the following organs: Liver. Gastrointestinal tract. Repeated skin application to laboratory animals did not produce systemic toxicity.

Solvent naphtha (petroleum), heavy arom.: Excessive exposure to solvents may cause respiratory irritation and central nervous system depression.

Naphthalene: In animals, effects have been reported on the following organs: Respiratory tract. Excessive exposure may cause haemolysis, thereby impairing the blood's ability to transport oxygen.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapour or dust. Ingestion of naphthalene by humans has caused haemolytic anaemia

Carcinogenicity

Triclopyr-2-butoxyethyl ester: For similar active ingredients: Triclopyr: Did not cause cancer in laboratory animals.

Picloram isooctyl esters: For similar active ingredients: Picloram. Did not cause cancer in laboratory animals.

Solvent naphtha (petroleum), heavy arom.: Limited evidence of carcinogenicity in animal studies. Contains naphthalene which has caused cancer in some laboratory animals., In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Naphthalene: Limited evidence of carcinogenicity in animal studies. Has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative

Teratogenicity

Triclopyr-2-butoxyethyl ester: For similar active ingredients: Triclopyr: Has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

For the 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

Triclopyr-2-butoxyethyl ester: For similar active ingredients: 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 isooctyl esters: For similar active ingredients. 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.

Solvent naphtha (petroleum), heavy arom.: Available data are inadequate to determine effects on reproduction. For similar materials: Did not cause birth defects or any other foetal effects in laboratory animals.

Naphthalene: Available data are inadequate to determine effects on reproduction. Did not cause birth defects in laboratory animals.

Germ cell Mutagenicity

Triclopyr-2-butoxyethyl ester: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Picloram isooctyl esters: In vitro genetic toxicity studies were negative. Based on limited data and/or screening studies animal genetic toxicity studies were negative.

Solvent naphtha (petroleum), heavy arom.: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Naphthalene: In vitro genetic toxicity studies were negative in some cases and positive in other cases.

C10-16-Alkylbenzene sulfonic acid: This material was not mutagenic in an Ames bacterial assay. Animal genetic toxicity studies were negative.

Aspiration Hazard

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

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

Solvent naphtha (petroleum), heavy arom.: May be fatal if swallowed and enters airways.

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

C10-16-Alkylbenzene sulfonic acid: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

SECTION 12: ECOLOGICAL INFORMATION

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

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

Acute toxicity to aquatic invertebrates

EC50, Water flea (*Daphnia magna*), 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, Bobwhite quail (*Colinus virginianus*), 21 day, 735 mg/kg bodyweight.

Material is slightly toxic to birds on a dietary basis (LC50 between 1,001 and 5,000 ppm).
Dietary LC50, Bobwhite quail (*Colinus virginianus*), 8 day, 1,890 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 isooctyl esters

Acute toxicity to fish
For similar active ingredient(s). Picloram. 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).
For similar active ingredient(s). Picloram. LC50, Rainbow trout *(Oncorhynchus mykiss*), static test, 96 Hour, 8.8 mg/l

Acute toxicity to aquatic invertebrates
For similar active ingredient(s). EC50, *Daphnia magna*, 48 Hour, 44.2 mg/l

Acute toxicity to algae/aquatic plants
For similar material(s): ErC50, green algae *(Pseudokirchneriella subcapitata*), 72 Hour, Growth rate inhibition, > 78.7 mg/l
For similar material(s): EC50, *Lemna gibba*, Growth inhibition, 14 day, 102 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on a dietary basis (LC50 > 5,000 ppm).
As product: dietary LC50, Bobwhite quail (*Colinus virginianus*), 8 d, > 5,620 mg/kg diet.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified.

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, Rainbow trout (*Oncorhynchus mykiss*) 96 hour, static test, 2 - 5 mg/L. OECD Test Guideline 203 or Equivalent.

Acute toxicity to aquatic invertebrates
EL50, Water flea (*Daphnia magna*), 48 hour, static test, 3 - 10 mg/L. OECD Test Guideline 202 or Equivalent.

Acute toxicity to algae/aquatic plants
EL50, green algae (*Pseudokirchneriella subcapitata*), 72 h, static test, 11 mg/L. OECD Test Guideline 201 or Equivalent

Toxicity to Above Ground Organisms
For similar material: Dietary LC50, Bobwhite quail (*Colinus virginianus*), 5 day > 6,500 ppm
For similar material: Oral LC50, Bobwhite quail (*Colinus virginianus*): > 2,250 ppm

Naphthalene

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), 96 Hour, 0.11 mg/l

Acute toxicity to aquatic invertebrates
EC50, Water flea *(Daphnia magna*), static test, 48 Hour, 1.6 - 24.1 mg/l

Acute toxicity to algae/aquatic plants
ErC50, *Skeletonema costatum* (marine diatom), Growth rate inhibition, 72 Hour, 0.4 mg/l

M-Factor (acute aquatic toxicity): 1

Chronic toxicity to fish
NOEC, Other, flow-through, 40 d, mortality, 0.37 mg/L.

M-Factor (chronic aquatic toxicity): 1

C10-16 – Alkylbenzene sulfonic acid

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, rainbow trout (*Oncorhynchus mykiss*), static test, 96 Hour, 3 mg/L.
LC50 Carp (*Leuciscus idus melanotus*), 96 hour, 5.6 mg/L. OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Water flea *(Daphnia magna*), 48 Hour, 2.9 mg/L. OECD Test Guideline 202 or Equivalent.

Acute toxicity to algae/aquatic plants
ErC50, green algae *(Pseudokirchneriella subcapitata*), 96 Hour, 170 mg/L.

EC50, Algae (*Selenastrum capricornutum*), 96 hour, 170 mg/L.

Toxicity to microorganisms
EC50, bacteria, 16 Hour, 51 mg/L.

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 kg/kg

Stability in Water (1/2-life)
Hydrolysis, half-life, 8.7 d, pH 7, Half-life, 25 °C

Photodegradation
Atmospheric half-life: 2.3E-11 cm^3/s. Estimated

Picloram isooctyl esters

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).

Stability in Water (1/2-life): Hydrolysis, half-life, 38.7 d, pH 7, Half-life, 25 °C

Photodegradation
Test Type: Half-life (direct photolysis)
Atmospheric half-life: 70.6 min
Method: Measured

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified
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: 28 day, 39%. 10-day Window: Fail. OECD Test Guideline 301D or Equivalent.

Naphthalene

Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Theoretical Oxygen Demand: 3.00 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	57.0 %
10 d	71.0 %
20 d	71.0 %

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: Concentration: 1,500,000 1/cm3
Rate constant: 2.16E-11 cm3/s
Method: Estimated.

C10-16 – Alkylbenzene sulfonic acid

Biodegradability: Material is readily biodegradable. Passes OECD test for ready biodegradability.
10-day Window: Pass
Concentration: 10 mg/L
Biodegradation: 84 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent

Biodegradation, 28 day, 80%, 10-day window: Pass. OECD Test Guideline 301B or Equivalent

Bioaccumulative potential

Triclopyr-2-butoxyethyl ester

Bioconcentration factor (BCF): 110 Fish
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): 4.62
pH: 7

Picloram isooctyl esters

Bioaccumulation: No data available for this product. For the active ingredient(s): Picloram. Bioconcentration potential is moderate (BCF between 100 and 3,000 or Log Pow between 3 and 5).

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified

Bioaccumulation: For similar material(s): Bioconcentration potential is high (BCF > 3,000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water (log Pow): 2.9 -6.1

Naphthalene

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): 3.3 Measured
Bioconcentration factor (BCF): 40 - 300 Fish 28 d Measured

C10-16 – Alkylbenzene sulfonic acid

Partition coefficient: n-octanol/water: No relevant data found.

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 isooctyl esters

For the active ingredient(s): Picloram. Potential for mobility in soil is very high (Koc between 0 and 50).
Stability in soil: photolysis, 115 days. Measured.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified

No relevant data found.

Naphthalene

Potential for mobility in soil is medium (Koc between 150 and 500).
Partition coefficient (Koc): 240 – 1,300. Measured

C10-16 – Alkylbenzene sulfonic acid

No relevant data found

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 isooctyl esters

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified

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

Naphthalene

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

C10-16 – Alkylbenzene sulfonic acid

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

Other adverse effects

Triclopyr-2-butoxyethyl ester

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

Picloram isooctyl esters

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

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified

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

Naphthalene

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

C10-16 – Alkylbenzene sulfonic acid

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.

SECTION 14: TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr, Naphthalene)
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr, Naphthalene)
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, Naphthalene)
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, Naphthalene)
Class	:	9
Packing group	:	III
Labels	:	9

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 packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: REGULATORY INFORMATION

Poison Schedule: S6
APVMA Approval Number: 46640

SECTION 16: ANY OTHER RELEVANT INFORMATION

Revision
Identification Number: 101191949 / A143 / Issue Date: 03.08.2023 / Replaces: 22.02.2021
DAS Code: IWD-4460
Sections amend: All

Legend

ACGIH	USA. American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV)
AU OEL	Australia. Workplace Exposure Standards for Airborne Contaminants.
Corteva OEL	Corteva Occupational Exposure Limit
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

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; AIIC - Australian Inventory of Industrial Chemicals; 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.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.