

**Product name: ENTRENCH® Hiload Nitrogen Stabiliser****Issue Date: 6.01.2021**

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: ENTRENCH® Hiload Nitrogen Stabiliser****Recommended use of the chemical and restrictions on use****Identified uses:** Stabiliser**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**

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

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**GHS Classification**

Acute aquatic toxicity - Category 2

Chronic aquatic toxicity - Category 2

**GHS label elements****Hazard pictograms****Hazard statements**

Toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Avoid release to the environment.

**Response**

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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Component	CASRN	Concentration
Nitrapyrin	1929-82-4	25.97 %
Propylene glycol	57-55-6	≥ 10.0 - < 20.0 %
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	≥ 3.0 - < 10.0 %
4,6-dichloro-2-trichloromethyl pyridine	1129-19-7	≥ 1.0 - < 3.0 %
2,3,4,5,6-Pentachloropyridine	2176-62-7	≥ 0.3 - < 1.0 %
3-Chloro-6-(trichloromethyl)pyridine	1197-03-1	≥ 0.1 - < 3.0 %
Balance	Not available	37.03 – 59.63 %

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**SECTION 4: FIRST AID MEASURES**


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**Description of first aid measures**

**General advice:** 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. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**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.

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

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and

special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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

**Notes to physician:** 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:** To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. 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:** Do not use direct water stream. May spread fire.

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

**Hazardous combustion products:** Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated. Residue can burn.

**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. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. 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:** 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. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed. 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
Nitrapyrin (ISO)	ACGIH	TWA	10 mg/m <sup>3</sup>
	ACGIH	STEL	20 mg/m <sup>3</sup>
	AU OEL	TWA	10 mg/m <sup>3</sup>
	AU OEL	STEL	20 mg/m <sup>3</sup>
Propylene glycol	US WEEL	TWA	10 mg/m <sup>3</sup>
	AU OEL	TWA particulate	10 mg/m <sup>3</sup>
	AU OEL	TWA Total (Vapour and particles)	474 mg/m <sup>3</sup> 150 ppm
Solvent naphtha (petroleum), heavy aromatic	ACGIH	TWA	200 mg/m <sup>3</sup> , total hydrocarbon vapour
	Dow IHG	TWA	100 mg/m <sup>3</sup>
		STEL	300 mg/m <sup>3</sup>
2,3,4,5,6-Pentachloropyridine	Dow IHG	TWA	7 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 safety glasses (with side shields).

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. 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 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. 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: Recommended practices for occupational eye protection.

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

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

AS/NZS 2161: Occupational protective gloves.

AS/NZS 2210: Occupational protective footwear.

AS/NZS 4501: Occupational protective clothing Set

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Tan
<b>Odour</b>	Mild
<b>Odour Threshold</b>	No data available
<b>pH</b>	7.9 1% <i>Aqueous solution</i>
<b>Melting point/range</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	No data available
<b>Flash point</b>	<b>closed cup</b> > 100 °C
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available

<b>Flammability (solid, gas)</b>	Not Applicable
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapour Pressure</b>	No data available
<b>Relative Vapour Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	No data available
<b>Water solubility</b>	Miscible
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Dynamic Viscosity</b>	No data available
<b>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	No
<b>Oxidizing properties</b>	No, No significant increase (>5C) in temperature
<b>Liquid Density</b>	1.1553 g/ml 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:** Thermally stable at typical use temperatures.

**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: Strong 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.

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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**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.  
As product: LD50, Rat, female, > 2,000 mg/kg. No deaths occurred at this concentration.

#### **Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.  
As product: LD50, Rat, male and female, > 2,000 mg/kg. No deaths occurred at this concentration.

**Acute inhalation toxicity**

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

As product: LC50, Rat, male and female, 4 Hour, dust/mist, > 5.65 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 slight temporary eye irritation.

Corneal injury is unlikely.

**Sensitization**

For skin sensitization: Did not demonstrate 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:

Blood. Kidney. Liver. Female reproductive organs.

Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

**Carcinogenicity**

For the active ingredient(s): Kidney effects and/or tumours have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

**Teratogenicity**

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

**Reproductive toxicity**

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

**Mutagenicity**

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

**Aspiration Hazard**

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

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**SECTION 12: ECOLOGICAL INFORMATION**

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

**Ecotoxicity****Nitrapyrin****Acute toxicity to fish**

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 3.4 - 7.9 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Rainbow trout (Oncorhynchus mykiss), static test, 96 Hour, 4 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, eastern oyster (Crassostrea virginica), flow-through test, 96 Hour, 1.8 mg/l

LC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 2.2 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 1.7 mg/l

**Chronic toxicity to fish**

NOEC, Fathead minnow (Pimephales promelas), 34 d, 2.87 mg/l

**Toxicity to Above Ground Organisms**

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Oral LD50, Anas platyrhynchos (Mallard duck), 2708mg/kg bodyweight.

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

Dietary LC50, Anas platyrhynchos (Mallard duck), 1466 mg/kg diet.

Dietary LC50, Coturnix japonica (Japanese quail), 820 mg/kg diet.

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

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

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 15 d, survival, 209 mg/kg

**Propylene glycol****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), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

LC50, Ceriodaphnia Dubia (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

NOEC, Pseudomonas putida, 18 Hour, > 20,000 mg/l



**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia Dubia (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

**Solvent naphtha (petroleum), heavy aromatic****Acute toxicity to fish**

For similar material(s): 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).

EC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 3.6 mg/l

LL50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 2 - 5 mg/l

**Acute toxicity to aquatic invertebrates**

For similar material(s): EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 1.1 mg/l

EL50, Daphnia magna (Water flea), static test, 48 Hour, 1.4 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

For similar material(s): EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 7.9 mg/l

EL50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth inhibition (cell density reduction), 1 - 3 mg/l, OECD Test Guideline 201

**4,6-dichloro-2-trichloromethyl pyridine****Acute toxicity to fish**

No relevant data found.

**2,3,4,5,6-Pentachloropyridine****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, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 0.47 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, > 4 mg/l

**3-Chloro-6-(trichloromethyl)pyridine****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).

Bluegill sunfish (Lepomis macrochirus), Static, 96 Hour, 3.4 - 7.9 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 2.2 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 1.7 mg/l

**Chronic toxicity to fish**

Fathead minnow (Pimephales promelas), 34 d, 2.87 mg/l

**Toxicity to Above Ground Organisms**

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Oral LD50, Anas platyrhynchos (Mallard duck), 2,708 mg/kg

Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

Dietary LC50, Anas platyrhynchos (Mallard duck), 1466mg/kg diet.

Dietary LC50, Coturnix japonica (Japanese quail), 820 ppm

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 15 d, survival, 209 mg/kg

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

No relevant data found.

**Persistence and degradability****Nitrapyrin****Biodegradability:** Chemical degradation (hydrolysis) is expected in the environment within days to weeks. Degradation is expected in the soil environment within days to weeks.**Theoretical Oxygen Demand:** 0.97 mg/mg**Stability in Water (1/2-life)**

Hydrolysis, half-life, 186 Hour, pH 5, Half-life Temperature 25 °C

Hydrolysis, half-life, 173 - 233 Hour, pH 7, Half-life Temperature 25 °C

Hydrolysis, half-life, 129 Hour, pH 9, Half-life Temperature 25 °C

**Propylene glycol****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).**10-day Window:** Pass**Biodegradation:** 81 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301F or Equivalent**10-day Window:** Not applicable**Biodegradation:** 96 %**Exposure time:** 64 d**Method:** OECD Test Guideline 306 or Equivalent**Theoretical Oxygen Demand:** 1.68 mg/mg**Chemical Oxygen Demand:** 1.53 mg/mg

Incubation Time	BOD
5 d	69.0 %
10 d	70.0 %
20 d	86.0 %

**Photodegradation****Atmospheric half-life:** 10 Hour**Method:** Estimated.**Solvent naphtha (petroleum), heavy aromatic****Biodegradability:** For similar material(s): Biodegradation may occur under aerobic conditions (in the presence of oxygen). 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:** 58.6 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301F

**4,6-dichloro-2-trichloromethyl pyridine**

**Biodegradability:** No relevant data found.

**2,3,4,5,6-Pentachloropyridine**

**Biodegradability:** No relevant data found.

**Theoretical Oxygen Demand:** 0.64 mg/mg

**3-Chloro-6-(trichloromethyl)pyridine**

**Biodegradability:** Chemical degradation (hydrolysis) is expected in the environment within days to weeks. Degradation is expected in the soil environment within days to weeks.

**Theoretical Oxygen Demand:** 0.97 mg/g

**Stability in Water (1/2-life)**

half-life, 186 Hour, pH 5, Half-life Temperature 25 °C, Hydrolysis

half-life, 173 - 233 Hour, pH 7, Half-life Temperature 25 °C, Hydrolysis

half-life, 129 Hour, pH 9, Half-life Temperature 25 °C, Hydrolysis

**Balance**

**Biodegradability:** No relevant data found.

**Bioaccumulative potential****Nitrapyrin**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Partition coefficient: n-octanol/water (log Pow):** 3.324 Measured

**Bioconcentration factor (BCF):** < 85 Lepomis macrochirus (Bluegill sunfish) 30 d Measured

**Propylene glycol**

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

**Partition coefficient: n-octanol/water (log Pow):** -1.07 Measured

**Bioconcentration factor (BCF):** 0.09 Estimated.

**Solvent naphtha (petroleum), heavy aromatic**

**Bioaccumulation:** For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

**4,6-dichloro-2-trichloromethyl pyridine**

**Bioaccumulation:** No relevant data found.

**2,3,4,5,6-Pentachloropyridine**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Partition coefficient: n-octanol/water (log Pow):** 3.53 Measured

**3-Chloro-6-(trichloromethyl)pyridine**

**Bioconcentration factor (BCF):** < 85 Bluegill sunfish (Lepomis macrochirus) 30 d Measured

**Balance**

**Bioaccumulation:** No relevant data found.

**Mobility in Soil****Nitrapyrin**

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

**Partition coefficient (Koc):** 321 Measured

**Propylene glycol**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

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

**Partition coefficient (Koc):** < 1 Estimated.

**Solvent naphtha (petroleum), heavy aromatic**

No data available.

**4,6-dichloro-2-trichloromethyl pyridine**

No relevant data found.

**2,3,4,5,6-Pentachloropyridine**

No data available.

**Balance**

No relevant data found.

**Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Other adverse effects****Nitrapyrin**

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

**Propylene glycol**

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

**Solvent naphtha (petroleum), heavy aromatic**

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

**4,6-dichloro-2-trichloromethyl pyridine**

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

**2,3,4,5,6-Pentachloropyridine**

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.

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

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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. (Nitrapyrin)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	Nitrapyrin

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

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nitrapyrin)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	Nitrapyrin
<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. (Nitrapyrin)
<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:** No poison schedule number allocated.

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## SECTION 16: ANY OTHER RELEVANT INFORMATION

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### Revision

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### 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
STEL	Exposure standard - short term exposure limit
TWA	8-hr Time Weighted Average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

### 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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