

PERIGEN DEFENCE RESIDUAL INSECTICIDE

Version	Revision Date:	SDS Number:	Date of last issue: -
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SECTION 1: IDENTIFICATION

Product name : PERIGEN DEFENCE RESIDUAL INSECTICIDE

Product code : Article/SKU: 81715025 UVP: 06069142 Specification: 102000014424

Manufacturer or supplier's details

Company : 2022 Environmental Science AU Pty Ltd
ABN 49 656 513 923

Address : Suite 2.06, Level 2, 737 Burwood Road
Hawthorn East, Australia 3123

Telephone : (03) 7019 3839

Emergency telephone number : +61 2 9037 2994

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Serious eye damage/eye irritation : Category 2A

Skin sensitisation : Category 1

Carcinogenicity : Category 2


Specific target organ toxicity - single exposure : Category 3

Aspiration hazard : Category 1

GHS label elements

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- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H227 Combustible liquid.
H302 + H332 Harmful if swallowed or if inhaled.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
- Supplemental Hazard Statements : AUH066 Repeated exposure may cause skin dryness or cracking.
- Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see supplemental first aid instructions on this label).
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

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Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).
Vapours may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Emulsifiable concentrate (EC)

Components

Chemical name	CAS-No.	Concentration (% w/w)
Permethrin	52645-53-1	>= 30 -< 60
Hydrocarbons, C10, aromatics, >1% naphthalene	64742-94-5	>= 30 -< 60
Calcium dodecylbenzenesulphonate	26264-06-2	>= 3 -< 10
2-Ethylhexan-1-ol	104-76-7	< 10

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

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- If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : The product causes irritation of eyes, skin and mucous membranes.
Skin and eye paraesthesia which may be severe
Usually transient with resolution within 24 hours
sneezing
Cough
muscle twitching
discomfort in the chest
anorexia
lethargy
Pulmonary oedema
Prostration
Airway hyperreaction
Somnolence
Dizziness
Coma
Blurred vision
Convulsions
Headache
Nausea
Tremors
Diarrhoea
Vomiting
Palpitation
Abdominal pain
tachycardia
hypotension
Cough
Fever
Cyanosis
Shortness of breath
Somnolence
Dizziness
Headache
Nausea
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Aspiration may cause pulmonary oedema and pneumonitis.
Inhalation may provoke the following symptoms:
If large amounts are ingested, the following symptoms may occur:
Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).
This product contains a pyrethroid.
Pyrethroid poisoning should not be confused with carbamate

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or organophosphate poisoning.
 Harmful if swallowed or if inhaled.
 May be fatal if swallowed and enters airways.
 May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause drowsiness or dizziness.
 Suspected of causing cancer.
 Repeated exposure may cause skin dryness or cracking.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : There is no specific antidote available.
 Initial treatment: symptomatic.
 Oxygen or artificial respiration if needed.
 Keep respiratory tract clear.
 Monitor: kidney, liver and pancreas function.
 Monitor: respiratory and cardiac functions.
 In case of aspiration intubation and bronchial lavage should be considered.
 In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.
 If not effective, phenobarbital may be used.
 In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours.
 However, the application of activated charcoal and sodium sulphate is always advisable.
 Contraindication: derivatives of adrenaline.
 Contraindication: atropine.
 Recovery is spontaneous and without sequelae.
 In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
 Flash back possible over considerable distance.
 Vapours may form explosive mixtures with air.
 Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Chlorine compounds
 Carbon oxides
 Metal oxides

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Sulphur compounds

- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
- Hazchem Code : •3Z
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
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SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
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- Advice on safe handling** : Do not get on skin or clothing.
Avoid breathing mist or vapours.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures** : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.
- Conditions for safe storage** : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.
- Materials to avoid** : Do not store with the following product types:
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C10, aromatics, >1% naphthalene	64742-94-5	TWA (Mist)	5 mg/m ³	AU OEL
		TWA (Inhalable particulate matter)	5 mg/m ³	ACGIH
2-Ethylhexan-1-ol	104-76-7	TWA	5 ppm	ACGIH

- Engineering measures** : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust

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ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type

Hand protection

Material : Nitrile rubber
 Break through time : > 480 min
 Glove thickness : > 0.4 mm
 Protective index : Class 6

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
 Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
 Wear the following personal protective equipment:
 If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
 Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : yellow, brown

Odour : aromatic

Odour Threshold : No data available

pH : No data available

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Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : 72 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Ignitable (see flash point)

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : ca. 1.06 g/cm³ (20 °C)

Solubility(ies)
Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : The substance or mixture is not classified self-reactive.

Viscosity
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

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Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Combustible liquid. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes	:	Inhalation Skin contact Ingestion Eye contact
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Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): 1,479 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method

Components:**Permethrin:**

Acute oral toxicity	:	LD50 (Rat): 480 - 554 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 2.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Hydrocarbons, C10, aromatics, >1% naphthalene:

Acute oral toxicity	:	LD50 (Rat): 5,558 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 4.688 mg/l Exposure time: 4 h Test atmosphere: dust/mist

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Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Calcium dodecylbenzenesulphonate:

Acute oral toxicity : LD50 (Rat): > 500 - 2,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

2-Ethylhexan-1-ol:

Acute oral toxicity : LD50 (Rat): 2,047 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.89 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : No skin irritation

Components:**Permethrin:**

Species : Rabbit
Result : No skin irritation

Hydrocarbons, C10, aromatics, >1% naphthalene :

Species : Rabbit
Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

Calcium dodecylbenzenesulphonate:

Species : Rabbit

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Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Based on data from similar materials

2-Ethylhexan-1-ol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Components:**Permethrin:**

Species : Rabbit
Result : No eye irritation

Hydrocarbons, C10, aromatics, >1% naphthalene :

Species : Rabbit
Result : No eye irritation

Calcium dodecylbenzenesulphonate :

Species : Rabbit
Result : Irreversible effects on the eye
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

2-Ethylhexan-1-ol:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days
Method : OECD Test Guideline 405

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

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Components:

Permethrin:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	positive
Assessment	:	Probability or evidence of skin sensitisation in humans

Hydrocarbons, C10, aromatics, >1% naphthalene:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Calcium dodecylbenzenesulphonate:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

Permethrin:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
		Test Type: In vitro mammalian cell gene mutation test Result: negative
		Test Type: Chromosome aberration test in vitro Result: negative
		Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative
		Test Type: Chromosome aberration test in vitro Result: positive
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse

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Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Species: Mouse

Result: negative

Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Mouse

Result: negative

Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)

Species: Rat

Application Route: Intraperitoneal injection

Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: positive

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Hydrocarbons, C10, aromatics, >1% naphthalene :

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Calcium dodecylbenzenesulphonate :

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Remarks: Based on data from similar materials

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Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

2-Ethylhexan-1-ol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:**Permethrin:**

Species : Rat
Result : negative

Species : Mouse
Result : negative

Hydrocarbons, C10, aromatics, >1% naphthalene:

Species : Rat
Application Route : inhalation (vapour)
Exposure time : 105 weeks
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

2-Ethylhexan-1-ol:

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

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Reproductive toxicity

Not classified based on available information.

Components:**Permethrin:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

Hydrocarbons, C10, aromatics, >1% naphthalene:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Calcium dodecylbenzenesulphonate:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

2-Ethylhexan-1-ol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Skin contact

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Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

May cause drowsiness or dizziness.

Components:**Hydrocarbons, C10, aromatics, >1% naphthalene:**

Assessment : May cause drowsiness or dizziness.

2-Ethylhexan-1-ol:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:**Calcium dodecylbenzenesulphonate:**

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

2-Ethylhexan-1-ol:

Assessment : No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Repeated dose toxicity**Components:****Permethrin:**

Species : Rat
NOAEL : 0.2201 mg/l
Application Route : Inhalation
Exposure time : 90 Days

Species : Rat
NOAEL : 175 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Hydrocarbons, C10, aromatics, >1% naphthalene:

Species : Rat
NOAEL : 300 mg/kg
LOAEL : 600 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

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Calcium dodecylbenzenesulphonate:

Species	: Rat
LOAEL	: > 200 mg/kg
Application Route	: Ingestion
Exposure time	: 6 - 7 Weeks
Method	: OECD Test Guideline 422
Remarks	: Based on data from similar materials

Species	: Rabbit
NOAEL	: > 100 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days
Method	: OECD Test Guideline 410
Remarks	: Based on data from similar materials

2-Ethylhexan-1-ol:

Species	: Rat
NOAEL	: 250 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days
Method	: OECD Test Guideline 408

Species	: Rat
NOAEL	: 0.6384 mg/l
Application Route	: inhalation (vapour)
Exposure time	: 90 Days
Method	: OECD Test Guideline 413

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C10, aromatics, >1% naphthalene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Other organisms relevant to the environment	: Toxic to terrestrial vertebrates., Very toxic to terrestrial invertebrates.
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Components:

Permethrin:

- Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 0.00079 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.0001 mg/l
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 1.13 mg/l
Exposure time: 72 h
- EC10 (*Pseudokirchneriella subcapitata* (green algae)): 0.0023 mg/l
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC (*Danio rerio* (zebra fish)): 0.00041 mg/l
Exposure time: 35 d
Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 0.0047 µg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
- Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h

Hydrocarbons, C10, aromatics, >1% naphthalene :

- Toxicity to fish : LL50 (*Oncorhynchus mykiss* (rainbow trout)): 2 - 5 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EL50 (*Daphnia magna* (Water flea)): 10 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : NOELR (*Pseudokirchneriella subcapitata* (green algae)): 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
- EL50 (*Pseudokirchneriella subcapitata* (green algae)): > 1 - < 3 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

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Calcium dodecylbenzenesulphonate:

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials
- NOEC (Pseudokirchneriella subcapitata (green algae)): > 0.1 - 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 0.1 - 1 mg/l
Exposure time: 28 d
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

2-Ethylhexan-1-ol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 28.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h
Method: Directive 67/548/EEC, Annex V, C.2.
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 16.6 mg/l
Exposure time: 72 h
Method: Directive 67/548/EEC, Annex V, C.3.
- EC10 (Desmodesmus subspicatus (green algae)): 16.6 mg/l
Exposure time: 72 h
Method: Directive 67/548/EEC, Annex V, C.3.

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Persistence and degradability**Components:****Permethrin:**

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301F

Hydrocarbons, C10, aromatics, >1% naphthalene :

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 57.95 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Calcium dodecylbenzenesulphonate :

Biodegradability : Result: Readily biodegradable.
Remarks: Based on data from similar materials

2-Ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 79 - 99.9 %
Exposure time: 14 d

Bioaccumulative potential**Components:****Permethrin:**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 570

Partition coefficient: n-octanol/water : log Pow: 4.67

Calcium dodecylbenzenesulphonate :

Bioaccumulation : Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 4.77
Remarks: Calculation

2-Ethylhexan-1-ol:

Partition coefficient: n-octanol/water : log Pow: 2.9

Mobility in soil

No data available

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Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Do not dispose of waste into sewer.
- Contaminated packaging : Follow advice on product label and/or leaflet.
Empty containers retain residue and can be dangerous.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3082
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Permethrin, 3-Phenoxybenzylic alcohol)
- Class : 9
- Packing group : III
- Labels : 9
- Environmentally hazardous : yes

IATA-DGR

- UN/ID No. : UN 3082
- Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Permethrin, 3-Phenoxybenzylic alcohol)
- 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.
(Permethrin, 3-Phenoxybenzylic alcohol)
- Class : 9
- Packing group : III
- Labels : 9
- EmS Code : F-A, S-F

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Marine pollutant : yes

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. (Permethrin, 3-Phenoxybenzyl alcohol)
Class	:	9
Packing group	:	III
Labels	:	9
Hazchem Code	:	•3Z
Environmentally hazardous	:	yes

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

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform Scheduling of Medicines and Poisons	:	Schedule 6
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Prohibition/Licensing Requirements	:	There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.
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Product Type	:	Insecticides, acaricides and products to control other arthropods
Active substance	:	500 g/l Permethrin

SECTION 16: ANY OTHER RELEVANT INFORMATION

Further information

Revision Date	:	06.12.2023
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Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
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compile the Safety Data Sheet : eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
 AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average
 AU OEL / TWA : Exposure standard - time weighted average

AIIIC - Australian Inventory of Industrial Chemicals; 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; TECl - Thailand Existing Chemicals Inventory; 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

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their

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intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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