SAFETY DATA SHEET

CRACKDOWN RESIDUAL INSECTICIDE

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	30.11.2023	11291692-00001	Date of first issue: 30.11.2023

SECTION 1: IDENTIFICATION

Product name : CRACKDOWN RESIDUAL INSECTICIDE

Product code : Article/SKU: 84462942 UVP: 06068855 Specification:102000014058

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

Skin sensitisation : Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements :

Prevention:

P261 Avoid breathing mist or vapours.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P321 Specific treatment (see supplemental first aid instructions on this label).
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

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).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Suspo-emulsion (SE)

Components

Chemical name	CAS-No.	Concentration (% w/w)
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO)	51-03-6	< 10
Propylene glycol	57-55-6	< 10
Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics	Not Assigned	>= 1 -< 10
Deltamethrin	52918-63-5	< 10
Tetramethrin	7696-12-0	< 1
Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	>= 0.0015 -< 0.06

Alternative CAS Numbers for some regions

Chemical name	Alternative CAS Number(s)
Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	2682-20-4, 26172-55-4

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.

Get medical attention.

In case of skin contact	:	In case of contact, immediately flush skin with soap and 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	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	muscle twitching anorexia Salivation ataxia seizures Pulmonary oedema Airway hyperreaction Burning sensation Somnolence Dizziness Coma Blurred vision Convulsions Headache Nausea Tremors Diarrhoea Vomiting Palpitation Abdominal pain tachycardia hypotension May cause an allergic skin reaction. This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.
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	:	Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. ECG - monitoring (Electrocardiogram).

Contraindication: atropine.

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 firefighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides
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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	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	:	Soak up with inert absorbent material. 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 deter-

mine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid breathing mist or vapours. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment 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 in accordance with the particular national regulations.
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
Propylene glycol	57-55-6	TWA (particulate)	10 mg/m3	AU OEL
		TWA (Total (vapour and particles))	150 ppm 474 mg/m3	AU OEL
Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL

Engineering measures : Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

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

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 glasses

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : suspension

Colour : white

Odour : No data available

Odour Threshold : No data available

pH : 3 - 7 (23 °C)
Concentration: 100 %

Melting point/freezing point : No data available

Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
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. 1.01 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, dynamic	:	470 - 770 mPa.s (20 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	<= 4 µm

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
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

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423
Acute inhalation toxicity	:	LC50 (Rat): > 5.2 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402

Propylene glycol:

Acute oral toxicity	:	LD50 (Rat): 22,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 44.9 mg/l Exposure time: 4 h Test atmosphere: dust/mist

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

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4.951 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

Deltamethrin:

Acute oral toxicity : LD50 (Rat, female): 87 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0.6 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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

Tetramethrin:

Acute oral toxicity : LD50 (Mouse): > 300 - 2,000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.63 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Acute oral toxicity : LD50 (Rat): 64 mg/kg

Acute inhalation toxicity	:	LC50 (Rat): 0.171 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity	:	LD50 (Rabbit): 87.12 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Assessment	:	Repeated exposure may cause skin dryness or cracking.

Propylene glycol:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Species	:	Rabbit
Result	:	No skin irritation
Remarks	:	Based on data from similar materials
Assessment	:	Repeated exposure may cause skin dryness or cracking.

Deltamethrin:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Tetramethrin:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

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

Propylene glycol:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	Based on data from similar materials

Deltamethrin:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405

Tetramethrin:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Result	:	Irreversible effects on the eye
Remarks	:	Based on skin corrosivity.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Propylene glycol:

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

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Deltamethrin:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Tetramethrin:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

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

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Propylene glycol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

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

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Deltamethrin:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 473
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Method: OECD Test Guideline 482
Result: negative

Tetramethrin:

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: Ingestion
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	107 weeks
Method	:	OECD Test Guideline 451
Result	:	negative

Propylene glycol:

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

Deltamethrin:

Species	:	Rat
Application Route	:	Ingestion
Method	:	OECD Test Guideline 453
Result	:	negative

Tetramethrin:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Method	:	OECD Test Guideline 453
Result	:	positive
Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

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

Propylene glycol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study

Species: Mouse
Application Route: Ingestion
Result: negative

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

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Deltamethrin:

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: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Tetramethrin:

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

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Assessment : May cause respiratory irritation.

Tetramethrin:

Exposure routes	:	inhalation (dust/mist/fume)
Target Organs	:	Nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of >1.0 to 5.0 mg/l/4h.

STOT - repeated exposure

Not classified based on available information.

Components:

Deltamethrin:

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

Repeated dose toxicity

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Species	:	Rat
NOAEL	:	1,323 mg/kg
Application Route	:	Ingestion
Exposure time	:	7 Weeks

Propylene glycol:

Species	:	Rat, male
NOAEL	:	>= 1,700 mg/kg
Application Route	:	Ingestion
Exposure time	:	2 yr

Deltamethrin:

Species	:	Dog
NOAEL	:	1 mg/kg
LOAEL	:	10 mg/kg
Application Route	:	Ingestion
Exposure time	:	52 Weeks
Method	:	OECD Test Guideline 452

Tetramethrin:

Species	:	Rat
NOAEL	:	76 mg/kg
LOAEL	:	151 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Toxicity to fish	:	LC50 (Cyprinodon variegatus (sheepshead minnow)): 3.94 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.51 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 3.89 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 0.824 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.18 mg/l Exposure time: 35 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.03 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Propylene glycol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h
Toxicity to daphnia and other	:	EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l

aquatic invertebrates		Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l Exposure time: 7 d
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): > 20,000 mg/l Exposure time: 18 h

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 88,444 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 NOELR (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201

Deltamethrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.15 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (Chlorella vulgaris (Fresh water algae)): > 0.47 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.017 µg/l Exposure time: 260 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0041 µg/l Exposure time: 21 d

Toxicity to microorganisms	:	EC50 (activated sludge): > 0.3 mg/l Exposure time: 3 h

Tetramethrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 3.7 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.16 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l Exposure time: 72 h

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.16 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 0.0052 mg/l Exposure time: 48 h NOEC (Skeletonema costatum (marine diatom)): 0.00049 mg/l Exposure time: 48 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.02 mg/l Exposure time: 36 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.10 mg/l Exposure time: 21 d

Persistence and degradability

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 301D

Propylene glycol:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 98.3 %

Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 22.4 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Deltamethrin:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Tetramethrin:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 23 - 24 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 62 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO):

Partition coefficient: n-octanol/water : log Pow: 5

Propylene glycol:

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Regulation (EC) No. 440/2008, Annex, A.8

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Partition coefficient: n-octanol/water : Remarks: No data available

Deltamethrin:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,400

Partition coefficient: n-octanol/water	:	log Pow: 6.4

Tetramethrin:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 827 Method: OECD Test Guideline 305 Remarks: Based on data from similar materials
Partition coefficient: n-octanol/water	:	log Pow: > 4.09

Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)**:**

Partition coefficient: n-octanol/water	:	log Pow: < 1

Mobility in soil

No data available

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. (Deltamethrin, Tetramethrin)
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. (Deltamethrin, Tetramethrin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Deltamethrin, Tetramethrin)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
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. (Deltamethrin, Tetramethrin)
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	:	Schedule 6

Poisons

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.
Product Type	:	Insecticides, acaricides and products to control other arthropods
Active substance	:	80 g/l 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether (Piperonyl butoxide/PBO) 10 g/l Deltamethrin 10 g/l Tetramethrin

SECTION 16: ANY OTHER RELEVANT INFORMATION

Further information

Revision Date	:	30.11.2023
Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Date format	:	dd.mm.yyyy

Full text of other abbreviations

AU OEL	:	Australia. Workplace Exposure Standards for Airborne Contaminants.
AU OEL / TWA	:	Exposure standard - time weighted average

AIIC - 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 Chemi-

cal 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; TECI - 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 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.

AU / EN