

## Cypermethrin Liquid Formulation

|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number:    | Date of last issue: 30.09.2023  |
| 5.1     | 21.11.2023     | 10849842-00007 | Date of first issue: 12.09.2022 |

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### Section 1: Identification

Product name : Cypermethrin Liquid Formulation

Other means of identification : VANQUISH LONG WOOL SPRAY-ON LICE TREATMENT AND BLOWFLY STRIKE PREVENTIVE FOR LONG WOOLLED SHEEP AND UNSHORN LAMBS (38354)

#### Manufacturer or supplier's details

Company : MSD

Address : 33 Whakatiki Street - Private Bag 908  
Upper Hutt - New Zealand

Telephone : 0800 800 543

Emergency telephone number : 0800 764 766 (0800 POISON) 0800 243 622 (0800 CHEMCALL)

E-mail address : EHSDATASTEWARD@msd.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

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### Section 2: Hazard identification

#### GHS Classification

Skin sensitisation : Category 1

Carcinogenicity : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 2 (Nervous system)


Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 1

#### GHS label elements

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- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H317 May cause an allergic skin reaction.  
 H350 May cause cancer.  
 H361f Suspected of damaging fertility.  
 H371 May cause damage to organs (Nervous system).  
 H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**  
 P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P260 Do not breathe mist or vapours.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
 P302 + P352 IF ON SKIN: Wash with plenty of water.  
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P391 Collect spillage.
- Storage:**  
 P405 Store locked up.
- Disposal:**  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

None known.

**Section 3: Composition/information on ingredients**

Substance / Mixture : Mixture

**Components**

| Chemical name    | CAS-No.    | Concentration (% w/w) |
|------------------|------------|-----------------------|
| Propylene glycol | 57-55-6    | >= 1 -< 10            |
| Cypermethrin     | 52315-07-8 | >= 2.5 -< 10          |

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|   |            |             |
|---|------------|-------------|
| Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether | 37251-69-7 | >= 1 -< 2.5 |
| Formaldehyde  | 50-00-0    | >= 0.2 -< 1 |

**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.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.  
May cause cancer.  
Suspected of damaging fertility.  
May cause damage to organs.
- 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 and supportively.

**Section 5: Fire-fighting measures**

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)
- 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.

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Special protective equipment for firefighters : Evacuate area.  
 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 : 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 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.

Advice on safe handling : Do not get on skin or clothing.  
 Do not breathe mist or vapours.  
 Do not swallow.  
 Avoid contact with 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.  
 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

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- 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.  
 The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Conditions for safe storage : Keep in properly labelled containers.  
 Store locked up.  
 Keep tightly closed.  
 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  | WES-TWA (particulate)             | 10 mg/m <sup>3</sup>                           | NZ OEL   |
|                  |  | WES-TWA (Vapour and particulates) | 150 ppm<br>474 mg/m <sup>3</sup>               | NZ OEL   |
| Cypermethrin     | 52315-07-8   | TWA                               | 50 µg/m <sup>3</sup> (OEB 3)                   | Internal |
|                  | Further information: DSEN, Skin  |                                   |  |          |
|                  |  | Wipe limit                        | 100 µg/100 cm <sup>2</sup>                     | Internal |
| Formaldehyde     | 50-00-0  | WES-STEEL                         | 0.6 ppm  | NZ OEL   |
|                  | Further information: Skin sensitiser, Known or presumed human carcinogen |                                   |  |          |
|                  |  | TWA                               | 0.1 ppm  | ACGIH    |
|                  |  | STEEL                             | 0.3 ppm  | ACGIH    |

- Engineering measures** : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).  
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.  
 Laboratory operations do not require special containment.

**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 inorganic gas/vapour type

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Hand protection  
Material : Chemical-resistant gloves

Eye protection : Wear safety glasses with side shields or goggles.  
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.  
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.

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**Section 9: Physical and chemical properties**

Appearance : suspension

Colour : pink  
red

Odour : No data available

Odour Threshold : No data available

pH : 3.0 - 6.0

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

Relative density : 1.02

Density : No data available

Solubility(ies)

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|  |   |  |
|--|---|--|
| Water solubility                       | : | soluble  |
| Partition coefficient: n-octanol/water | : | Not applicable   |
| Auto-ignition temperature              | : | No data available  |
| Decomposition temperature              | : | No data available  |
| Viscosity                              | : |  |
| Viscosity, kinematic                   | : | No data available  |
| Explosive properties                   | : | Not explosive  |
| Oxidizing properties                   | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight                       | : | No data available  |
| Particle size                          | : | Not applicable   |

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**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. |

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**Section 11: Toxicological information**

|                 |   |  |
|-----------------|---|--|
| Exposure routes | : | Inhalation<br>Skin contact<br>Ingestion<br>Eye contact |
|-----------------|---|--|

**Acute toxicity**

Not classified based on available information.

**Product:**

|                           |   |  |
|---------------------------|---|--|
| Acute oral toxicity       | : | Acute toxicity estimate: > 2,000 mg/kg<br>Method: Calculation method   |
| Acute inhalation toxicity | : | Acute toxicity estimate: > 20000 ppm<br>Exposure time: 4 h<br>Test atmosphere: gas<br>Method: Calculation method |
| Acute dermal toxicity     | : | Acute toxicity estimate: > 2,000 mg/kg   |

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Method: Calculation method

**Components:****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

**Cypermethrin:**

- Acute oral toxicity : LD50 (Rat, female): 367 mg/kg  
LD50 (Rat, male): 891 mg/kg
- Acute dermal toxicity : LD50 (Rat): > 4,800 mg/kg  
LD50 (Rabbit): > 2,400 mg/kg

**Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

- Acute oral toxicity : LD50 (Rat): > 4,000 mg/kg
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

**Formaldehyde:**

- Acute oral toxicity : Acute toxicity estimate: 100 mg/kg  
Method: Expert judgement
- Acute inhalation toxicity : Acute toxicity estimate: 100 ppm  
Exposure time: 4 h  
Test atmosphere: gas  
Method: Expert judgement
- Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****Propylene glycol:**

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



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**Cypermethrin:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Method  | : | Draize Test        |
| Result  | : | No skin irritation |

**Formaldehyde:**

|         |   |   |
|---------|---|---|
| Species | : | Rabbit  |
| Method  | : | OECD Test Guideline 404                         |
| Result  | : | Corrosive after 3 minutes to 1 hour of exposure |

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Propylene glycol:**

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

**Cypermethrin:**

|         |   |                   |
|---------|---|-------------------|
| Species | : | Rabbit            |
| Result  | : | No eye irritation |
| Method  | : | Draize Test       |

**Formaldehyde:**

|         |   |                                 |
|---------|---|---------------------------------|
| Species | : | Rabbit                          |
| Result  | : | Irreversible effects on the eye |

**Respiratory or skin sensitisation****Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Propylene glycol:**

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

**Cypermethrin:**

|           |   |                        |
|-----------|---|------------------------|
| Test Type | : | Magnusson-Kligman-Test |
|-----------|---|------------------------|

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Species : Guinea pig  
 Assessment : Did not cause sensitisation on laboratory animals.  
 Result : Not a skin sensitizer.

### Formaldehyde:

Test Type : Local lymph node assay (LLNA)  
 Exposure routes : Skin contact  
 Species : Mouse  
 Method : OECD Test Guideline 429  
 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:

#### 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

#### Cypermethrin:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
 Test system: Human lymphocytes  
 Result: negative

Test Type: Microbial mutagenesis assay (Ames test)  
 Result: negative

Test Type: sister chromatid exchange assay  
 Test system: Human lymphocytes  
 Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
 Species: Rat  
 Application Route: Oral  
 Result: positive

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Test Type: In vivo micronucleus test  
 Species: Rat  
 Application Route: Dermal  
 Result: positive

Test Type: In vivo micronucleus test  
 Species: Rat  
 Application Route: Intraperitoneal injection  
 Result: negative

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

**Formaldehyde:**

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

Test Type: Chromosome aberration test in vitro  
 Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
 Species: Rat  
 Application Route: Inhalation  
 Result: positive

Germ cell mutagenicity - Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

**Carcinogenicity**

May cause cancer.

**Components:****Propylene glycol:**

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

**Formaldehyde:**

Species : Rat  
 Application Route : inhalation (gas)  
 Exposure time : 28 Months  
 Result : positive

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

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### Reproductive toxicity

Suspected of damaging fertility.

#### Components:

#### **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

#### **Cypermethrin:**

Effects on fertility : Test Type: Fertility  
Species: Rat, male  
Application Route: Oral  
Fertility: LOAEL: 68 mg/kg body weight  
Symptoms: Effects on fertility, male reproductive effects, Testicular effects

Test Type: Fertility  
Species: Rat, male  
Application Route: Oral  
Fertility: NOAEL: 6.25 mg/kg body weight  
Target Organs: male reproductive organs, Testis

Effects on foetal development : Test Type: Three-generation reproduction toxicity study  
Species: Mouse  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 5 mg/kg body weight  
Symptoms: No effects on foetal development, No effect on reproduction capacity, Reduced body weight

Test Type: Reproduction/Developmental toxicity screening test  
Species: Rabbit  
Application Route: Oral  
Teratogenicity: NOAEL: 30 mg/kg body weight  
Symptoms: No effects on foetal development

Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Oral  
Teratogenicity: NOAEL: 17.5 mg/kg body weight  
Symptoms: No effects on foetal development

Reproductive toxicity - As- : Some evidence of adverse effects on sexual function and

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essment fertility, based on animal experiments.

**Formaldehyde:**

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Rat  
 Application Route: inhalation (gas)  
 Result: negative

**STOT - single exposure**

May cause damage to organs (Nervous system).

**Components:****Cypermethrin:**

Target Organs : Nervous system  
 Assessment : May cause damage to organs.

**Formaldehyde:**

Assessment : May cause respiratory irritation.

**STOT - repeated exposure**

Not classified based on available information.

**Components:****Formaldehyde:**

Assessment : May cause damage to organs through prolonged or repeated exposure.  
 Remarks : Based on national or regional regulation.

**Repeated dose toxicity****Components:****Propylene glycol:**

Species : Rat, male  
 NOAEL :  $\geq 1,700$  mg/kg  
 Application Route : Ingestion  
 Exposure time : 2 yr

**Cypermethrin:**

Species : Rat  
 NOAEL : 5 mg/kg  
 Application Route : Oral  
 Exposure time : 3 Months  
 Target Organs : Central nervous system

Species : Rabbit  
 NOAEL : 12.5 mg/kg

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|                   |  |
|-------------------|--|
| Application Route | : Oral   |
| Exposure time     | : 3 Months   |
| Target Organs     | : Central nervous system                             |
| Species           | : Dog  |
| NOAEL             | : 1 mg/kg  |
| Application Route | : Oral   |
| Exposure time     | : 1 yr   |
| Symptoms          | : anxiety, central nervous system effects            |
| Species           | : Rabbit   |
| NOAEL             | : 20 mg/kg   |
| Application Route | : Dermal   |
| Exposure time     | : 3 Weeks  |
| Target Organs     | : male reproductive organs                           |
| Symptoms          | : reduced body weight gain, reduced food consumption |

### Formaldehyde:

|                   |                    |
|-------------------|--------------------|
| Species           | : Rat              |
| NOAEL             | : 6 ppm            |
| LOAEL             | : 10 ppm           |
| Application Route | : inhalation (gas) |
| Exposure time     | : 28 Days          |

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Components:

#### **Cypermethrin:**

|                     |   |
|---------------------|---|
| General Information | : Target Organs: Nervous system                           |
|                     | Symptoms: muscle weakness, central nervous system effects |
|                     | Remarks: Based on Human Evidence                          |
|                     | The most common side effects are:                         |
|                     | Remarks: paraesthesias                                    |

### Further information

#### Components:

#### **Cypermethrin:**

|         |                              |
|---------|------------------------------|
| Remarks | : Dermal absorption possible |
|---------|------------------------------|

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### Section 12: Ecological information

#### Ecotoxicity

##### Components:

##### **Propylene glycol:**

|  |   |   |
|--|---|---|
| Toxicity to fish   | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l<br>Exposure time: 96 h                                      |
| Toxicity to daphnia and other aquatic invertebrates                    | : | EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l<br>Exposure time: 48 h  |
| Toxicity to algae/aquatic plants                                       | : | ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l<br>Exposure time: 7 d   |
| Toxicity to microorganisms   | : | NOEC (Pseudomonas putida): > 20,000 mg/l<br>Exposure time: 18 h   |

##### **Cypermethrin:**

|  |   |  |
|--|---|--|
| Toxicity to fish   | : | EC50 (Oncorhynchus mykiss (rainbow trout)): 0.39 µg/l<br>Exposure time: 96 h       |
|  |   | EC50 (Cyprinodon variegatus (sheepshead minnow)): 0.95 µg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates                    | : | EC50 (Daphnia magna (Water flea)): 0.0036 µg/l<br>Exposure time: 48 h              |
|  |   | EC50 (Americamysis): 0.00475 µg/l<br>Exposure time: 48 h                           |
| M-Factor (Acute aquatic toxicity)                                      | : | 100,000  |
| Toxicity to fish (Chronic toxicity)                                    | : | NOEC (Pimephales promelas (fathead minnow)): 0.14 µg/l<br>Exposure time: 30 d      |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Mysidopsis bahia (opossum shrimp)): 0.000781 µg/l<br>Exposure time: 28 d     |
| M-Factor (Chronic aquatic toxicity)                                    | : | 100,000  |

##### **Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

|                  |   |                                       |
|------------------|---|---------------------------------------|
| Toxicity to fish | : | LC50 : 82 mg/l<br>Exposure time: 96 h |
|------------------|---|---------------------------------------|

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**Formaldehyde:**

- Toxicity to fish : LC50 : 6.7 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 5.8 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Orange-red killifish)):  $\geq$  48 mg/l  
Exposure time: 28 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)):  $\geq$  6.4 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211
- Toxicity to microorganisms : EC50: 34.1 mg/l  
Exposure time: 120 h

**Persistence and degradability****Components:****Propylene glycol:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 98.3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**Cypermethrin:**

- Stability in water : Degradation half life (DT50): 17 d

**Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:**

- Biodegradability : Result: Not readily biodegradable.  
Biodegradation:  $<$  70 %  
Exposure time: 28 d

**Formaldehyde:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 91 %  
Exposure time: 14 d  
Method: OECD Test Guideline 301C  
Remarks: Based on data from similar materials



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### Bioaccumulative potential

#### Components:

##### Propylene glycol:

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

##### Cypermethrin:

Bioaccumulation : Bioconcentration factor (BCF): 488

Partition coefficient: n-octanol/water : log Pow: 6.6

##### Formaldehyde:

Partition coefficient: n-octanol/water : log Pow: 0.35  
Remarks: Calculation

### Mobility in soil

#### Components:

##### Cypermethrin:

Distribution among environmental compartments : log Koc: 5.58  
Stability in soil :

#### Other adverse effects

No data available

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### Section 13: Disposal considerations

#### Disposal methods

Waste from residues : Do not dispose of waste into sewer.  
Dispose of in accordance with local regulations.  
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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### Section 14: Transport information

#### International Regulations

##### UNRTDG

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

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Environmentally hazardous : yes

**IATA-DGR**

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Cypermethrin)  
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.  
(Cypermethrin)  
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****NZS 5433**

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(Cypermethrin)  
Class : 9  
Packing group : III  
Labels : 9  
Hazchem Code : 3Z  
Marine pollutant : no

**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.

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**Section 15: Regulatory information**

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

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### HSNO Approval Number

HSR100759 Veterinary Medicines Non dispersive Open System Application Group Standard

### HSW Controls

Certified handler certificate not required.

Tracking hazardous substance not required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

### The components of this product are reported in the following inventories:

|       |   |                |
|-------|---|----------------|
| AICS  | : | not determined |
| DSL   | : | not determined |
| IECSC | : | not determined |

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### Section 16: Other information

Revision Date : 21.11.2023

#### Further information

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

|        |   |  |
|--------|---|--|
| ACGIH  | : | USA. ACGIH Threshold Limit Values (TLV)                                |
| NZ OEL | : | New Zealand. Workplace Exposure Standards for Atmospheric Contaminants |

|                   |   |   |
|-------------------|---|---|
| ACGIH / TWA       | : | 8-hour, time-weighted average                           |
| ACGIH / STEL      | : | Short-term exposure limit                               |
| NZ OEL / WES-TWA  | : | Workplace Exposure Standard - Time Weighted average     |
| NZ OEL / WES-STEL | : | Workplace Exposure Standard - Short-Term Exposure Limit |

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 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 Con-

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centration 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.

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