

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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)
Vanquish (A005997)

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

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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0	Revision Date: 14.04.2025	SDS Number: 10849842-00011	Date of last issue: 28.09.2024 Date of first issue: 12.09.2022
----------------	------------------------------	-------------------------------	-------------------------------------------------------------------

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	:	<p>Prevention:</p> <p>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.</p> <p>Response:</p> <p>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.</p> <p>Storage:</p> <p>P405 Store locked up.</p> <p>Disposal:</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>

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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024 Date of first issue: 12.09.2022

Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether	37251-69-7	>= 1 -< 2.5
Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate	68412-53-3	>= 0.25 -< 1
Formaldehyde	50-00-0	>= 0.1 -< 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.

In case of eye contact : Thoroughly clean shoes before reuse.
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 (CO₂)
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_x)

Specific extinguishing method : Use extinguishing measures that are appropriate to local cir-

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

ods	cumstances 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 determine 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	: 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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version
7.0

Revision Date:
14.04.2025

SDS Number:
10849842-00011

Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Hygiene measures

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.
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.
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 parame- ters / Permissible concentration	Basis
Propylene glycol	57-55-6	WES-TWA (particulate)	10 mg/m3	NZ OEL
		WES-TWA (Vapour and particulates)	150 ppm 474 mg/m3	NZ OEL
Cypermethrin	52315-07-8	TWA	50 µg/m3 (OEB 3)	Internal
		Further information: DSEN, Skin		
			Wipe limit	100 µg/100 cm2
Formaldehyde	50-00-0	WES-STEL	0.6 ppm	NZ OEL
		Further information: Skin sensitiser, Known or presumed human carcinogen		
			TWA	ACGIH
			STEL	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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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 organic vapour type

Hand protection : Chemical-resistant gloves

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.

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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.02
Density	:	No data available
Solubility(ies)		
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 characteristics		
Particle size	:	Not applicable

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
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Acute toxicity

Not classified based on available information.

Cypermethrin Liquid Formulation

Version 7.0

Revision Date: 14.04.2025

SDS Number: 10849842-00011

Date of last issue: 28.09.2024
Date of first issue: 12.09.2022**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20000 ppm
Exposure time: 4 h
Test atmosphere: gas
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
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

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Acute oral toxicity : LD50 (Rat): 4,450 mg/kg
Method: OECD Test Guideline 401

Formaldehyde:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg
Method: Expert judgement
Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate (Rat): 100 ppm

Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

	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

Cypermethrin:

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

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species	: Rabbit
Result	: Skin irritation

Formaldehyde:

Result	: Corrosive after 3 minutes to 1 hour of exposure
Remarks	: Based on national or regional regulation.

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

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species	: Rabbit
Result	: Irreversible effects on the eye
Method	: Draize Test

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Formaldehyde:

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:

Propylene glycol:

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

Cypermethrin:

Test Type	:	Magnusson-Kligman-Test
Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Result	:	Not a skin sensitizer.

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Exposure routes	:	Skin contact
Species	:	Humans
Result	:	negative

Formaldehyde:

Test Type	:	Human repeat insult patch test (HRIPT)
Exposure routes	:	Skin contact
Species	:	Humans
Result	:	positive

Assessment	:	Probability or evidence of high skin sensitisation rate in humans
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Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

Propylene glycol:

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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
	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: In vitro mammalian cell gene mutation test Result: positive
	Test Type: Chromosome aberration test in vitro

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Result: positive

Genotoxicity in vivo	: Test Type: In vivo mammalian alkaline comet assay Species: Mouse 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
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Cypermethrin Liquid FormulationVersion
7.0Revision Date:
14.04.2025SDS Number:
10849842-00011Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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 - Assessment

: Some evidence of adverse effects on sexual function and 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
Assessment

: Nervous system
: May cause damage to organs.

Formaldehyde:

Assessment

: May cause respiratory irritation.

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version
7.0

Revision Date:
14.04.2025

SDS Number:
10849842-00011

Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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	: >= 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
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

Aspiration toxicity

Not classified based on available information.

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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: paraesthesia

Further information

Components:

Cypermethrin:

Remarks : Dermal absorption possible

Section 12: Ecological information

Ecotoxicity

Components:

Propylene glycol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l
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

Cypermethrin:

Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): 0.39 µg/l
Exposure time: 96 h

EC50 (Cyprinodon variegatus (sheepshead minnow)): 0.95 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0036 µg/l
Exposure time: 48 h

Cypermethrin Liquid Formulation

Version 7.0	Revision Date: 14.04.2025	SDS Number: 10849842-00011	Date of last issue: 28.09.2024 Date of first issue: 12.09.2022
----------------	------------------------------	-------------------------------	-------------------------------------------------------------------

		EC50 (Americamysis): 0.00475 µg/l 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 Exposure time: 30 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Mysidopsis bahia (opossum shrimp)): 0.000781 µg/l Exposure time: 28 d
M-Factor (Chronic aquatic toxicity)	:	100,000
Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:		
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 0.1 - 1 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)): > 0.1 - 1 mg/l Exposure time: 48 h Method: ISO 6341 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
		NOEC (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l Exposure time: 100 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01 mg/l Exposure time: 28 d Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC10 (activated sludge): > 1 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Cypermethrin Liquid Formulation

Version
7.0

Revision Date:
14.04.2025

SDS Number:
10849842-00011

Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Remarks: Based on data from similar materials

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 0.1 - 1 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)): > 0.1 - 1 mg/l Exposure time: 48 h Method: ISO 6341 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
		NOEC (Raphidocelis subcapitata (freshwater green alga)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l Exposure time: 100 d Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01 mg/l Exposure time: 28 d Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC10 (activated sludge): > 1 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

Formaldehyde:

Toxicity to fish	:	LC50 (Morone saxatilis (striped bass)): 6.7 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 5.8 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l Exposure time: 72 h

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.04 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (activated sludge): 19 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

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.
Remarks: Based on data from similar materials

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Formaldehyde:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301A

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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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

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

Partition coefficient: n-octanol/water : log Pow: < 4
Remarks: Calculation

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgement

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

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.

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
Environmentally hazardous : yes

IATA-DGR

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

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.

Section 15: Regulatory information

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

HSNO Approval Number

HSR100759 Veterinary Medicines Non dispersive Open System Application Group Standard

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 10849842-00011 Date of last issue: 28.09.2024
Date of first issue: 12.09.2022

Tolerable Exposure Limits (TEL)

Not applicable

Environmental Exposure Limits (EEL)

Not applicable

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

Section 16: Other information

Revision Date : 14.04.2025

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/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

SAFETY DATA SHEET



Cypermethrin Liquid Formulation

Version
7.0

Revision Date:
14.04.2025

SDS Number:
10849842-00011

Date of last issue: 28.09.2024
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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; 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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