

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Deltamethrin (1%) Liquid Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
Walton Manor, Walton
MK7 7AJ Milton Keynes - United Kingdom

Telephone : +1-908-740-4000

E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

1.4 Emergency telephone number

+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 1B	H350: May cause cancer.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

- Hazard pictograms :
- Signal word : Danger
- Hazard statements : H317 May cause an allergic skin reaction.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P391 Collect spillage.

Hazardous components which must be listed on the label:

deltamethrin (ISO)
Formaldehyde

Additional Labelling

Restricted to professional users.

2.3 Other hazards

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

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

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
deltamethrin (ISO)	52918-63-5 258-256-6	Acute Tox. 3; H301 Acute Tox. 3; H331	>= 1 - < 2.5

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

	607-319-00-X	<p>Eye Irrit. 2; H319 Skin Sens. 1A; H317 Repr. 2; H361fd STOT SE 3; H335 STOT RE 1; H372 (Central nervous system, Immune system) STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410</p> <hr/> <p>M-Factor (Acute aquatic toxicity): 1,000,000 M-Factor (Chronic aquatic toxicity): 1,000,000</p>	
Formaldehyde	50-00-0 200-001-8 605-001-00-5 01-2119488953-20	<p>Flam. Gas 1B; H221 Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Muta. 2; H341 Carc. 1B; H350 STOT SE 3; H335</p> <hr/> <p>specific concentration limit Skin Corr. 1B; H314 >= 25 % Skin Irrit. 2; H315 5 - < 25 % Eye Irrit. 2; H319 5 - < 25 % STOT SE 3; H335 >= 5 % Skin Sens. 1A; H317 >= 0.2 %</p>	>= 0.2 - < 1
Nonylphenol, ethoxylated	9016-45-9	Acute Tox. 4; H302	>= 0.1 - < 0.25

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

		Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <hr/> M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	
Methanol	67-56-1 200-659-6 603-001-00-X	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370 (Eye, Central nervous system) <hr/> specific concentration limit STOT SE 1; H370 >= 10 % STOT SE 2; H371 3 - < 10 %	>= 0.1 - < 1
Substances with a workplace exposure limit :			
Propylene glycol	57-55-6 200-338-0		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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.
- 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).
- 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.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

- 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.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : May cause an allergic skin reaction.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure.
- This product contains a pyrethroid.
Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)
Bromine compounds

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

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.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and material for containment and cleaning up

Methods for 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.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Hygiene measures : 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.
: 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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.
Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Explosives
Gases

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Propylene glycol	57-55-6	TWA (Total vapour and particles)	150 ppm 474 mg/m ³	GB EH40
		TWA (particles)	10 mg/m ³	GB EH40
deltamethrin (ISO)	52918-63-5	TWA	15 µg/m ³ (OEB 3)	Internal
		Further information: DSEN, Skin		
		Wipe limit	100 µg/100 cm ²	Internal
Formaldehyde	50-00-0	TWA	2 ppm 2.5 mg/m ³	GB EH40
		Further information: Capable of causing cancer and/or heritable genetic dam-		

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
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	age.			
		STEL	2 ppm 2.5 mg/m ³	GB EH40
Further information: Capable of causing cancer and/or heritable genetic damage.				
		TWA	0.3 ppm 0.37 mg/m ³	2004/37/EC
Further information: Dermal sensitisation, Carcinogens or mutagens				
		STEL	0.6 ppm 0.74 mg/m ³	2004/37/EC
Further information: Dermal sensitisation, Carcinogens or mutagens				
Methanol	67-56-1	TWA	200 ppm 266 mg/m ³	GB EH40
Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		STEL	250 ppm 333 mg/m ³	GB EH40
Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		TWA	200 ppm 260 mg/m ³	2006/15/EC
Further information: Indicative, Identifies the possibility of significant uptake through the skin				

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Propylene glycol	Workers	Inhalation	Long-term local effects	10 mg/m ³
	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
Formaldehyde	Workers	Inhalation	Long-term systemic effects	9 mg/m ³
	Workers	Inhalation	Long-term local effects	0.375 mg/m ³
	Workers	Inhalation	Acute local effects	0.75 mg/m ³
	Workers	Skin contact	Long-term systemic effects	240 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0.037 mg/cm ²
	Consumers	Inhalation	Long-term systemic effects	3.2 mg/m ³
	Consumers	Inhalation	Long-term local effects	0.1 mg/m ³
	Consumers	Skin contact	Long-term systemic	102 mg/kg

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

			effects	bw/day
	Consumers	Skin contact	Long-term local effects	0.012 mg/cm ²
	Consumers	Ingestion	Long-term systemic effects	4.1 mg/kg bw/day
Methanol	Workers	Inhalation	Long-term systemic effects	130 mg/m ³
	Workers	Inhalation	Acute systemic effects	130 mg/m ³
	Workers	Inhalation	Long-term local effects	130 mg/m ³
	Workers	Inhalation	Acute local effects	130 mg/m ³
	Workers	Skin contact	Long-term systemic effects	20 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	20 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	26 mg/m ³
	Consumers	Inhalation	Acute systemic effects	26 mg/m ³
	Consumers	Inhalation	Long-term local effects	26 mg/m ³
	Consumers	Inhalation	Acute local effects	26 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	4 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	4 mg/kg bw/day

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Propylene glycol	Fresh water	260 mg/l
	Freshwater - intermittent	183 mg/l
	Marine water	26 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg dry weight (d.w.)
	Marine sediment	57.2 mg/kg dry weight (d.w.)
Formaldehyde	Soil	50 mg/kg dry weight (d.w.)
	Fresh water	0.44 mg/l
	Freshwater - intermittent	4.44 mg/l
	Marine water	0.44 mg/l
	Sewage treatment plant	0.19 mg/l
	Fresh water sediment	2.3 mg/kg dry weight (d.w.)
	Marine sediment	2.3 mg/kg dry weight (d.w.)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

	Soil	0.2 mg/kg dry weight (d.w.)
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8.2 Exposure controls

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.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.

Personal protective equipment

Eye/face 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.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Skin and body protection : Work uniform or laboratory coat.
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
Use appropriate degowning techniques to remove potentially contaminated clothing.

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Equipment should conform to BS EN 14387

Filter type : Combined particulates and inorganic gas/vapour type (B-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : suspension
Colour : white
Odour : No data available
Odour Threshold : No data available

pH : 6.4 - 7.4

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
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	:	0.994 - 1.014 (20 °C)
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	230 - 320 mm ² /s No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids)	:	No data available
Molecular weight	:	No data available
Particle size	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : 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: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

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

Components:

deltamethrin (ISO):

Acute oral toxicity : LD50 (Rat): 66.7 mg/kg
LD50 (Rat): 9 - 139 mg/kg
LD50 (Mouse): 19 - 34 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.8 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 2,000 mg/kg

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

LD50 (Rat): > 800 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 2.5 mg/kg
Application Route: Intravenous

LD50 (Mouse): 10 mg/kg
Application Route: Intraperitoneal

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

Nonylphenol, ethoxylated:

Acute oral toxicity : LD50 (Rat): 500 - 2,000 mg/kg

Methanol:

Acute oral toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement
Remarks: Based on national or regional regulation.

Acute dermal toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgement

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

Skin corrosion/irritation

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SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Components:

deltamethrin (ISO):

Species : Rabbit
Result : No skin irritation

Formaldehyde:

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

Nonylphenol, ethoxylated:

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

Methanol:

Species : Rabbit
Result : No skin irritation

Propylene glycol:

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

Serious eye damage/eye irritation

Not classified based on available information.

Components:

deltamethrin (ISO):

Species : Rabbit
Result : Moderate eye irritation

Formaldehyde:

Species : Rabbit
Result : Irreversible effects on the eye

Nonylphenol, ethoxylated:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irreversible effects on the eye

Methanol:

Species : Rabbit
Result : No eye irritation

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Propylene glycol:

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

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

deltamethrin (ISO):

Test Type : Maximisation Test
Exposure routes : Dermal
Species : Guinea pig
Result : negative

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

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

Nonylphenol, ethoxylated:

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

Methanol:

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

Propylene glycol:

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

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

Germ cell mutagenicity

Not classified based on available information.

Components:

deltamethrin (ISO):

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

Test Type: DNA Repair
Test system: Escherichia coli
Result: negative

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Concentration: LOAEL: 20 mg/kg
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: dominant lethal test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: sister chromatid exchange assay
Species: Mouse
Cell type: Bone marrow
Application Route: Oral
Result: negative

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)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Species: Rat
Application Route: Inhalation
Result: positive

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

Nonylphenol, ethoxylated:

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

Methanol:

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

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

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

Carcinogenicity

May cause cancer.

Components:

deltamethrin (ISO):

Species : Mouse, male and female
Application Route : oral (feed)
Exposure time : 104 weeks
NOAEL : 8 mg/kg body weight

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

LOAEL : 4 mg/kg body weight
Result : positive
Target Organs : Lymph nodes

Species : Rat, male and female
Application Route : oral (feed)
Exposure time : 2 Years
Result : negative

Species : Dog, male and female
Application Route : oral (feed)
Exposure time : 2 Years
NOAEL : 1 mg/kg body weight
Result : negative

Formaldehyde:

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

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

Methanol:

Species : Mouse
Application Route : inhalation (vapour)
Exposure time : 18 Months
Result : negative

Propylene glycol:

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

Reproductive toxicity

Not classified based on available information.

Components:

deltamethrin (ISO):

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: oral (feed)
Early Embryonic Development: NOAEL: 50 mg/kg body weight
Symptoms: No effects on fertility, Embryo-foetal toxicity
Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Species: Rat
Application Route: Oral
Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight
Symptoms: No effects on fertility, Embryo-foetal toxicity

Test Type: Fertility
Species: Rat, male
Application Route: Oral
Fertility: LOAEL: 1 mg/kg body weight
Symptoms: Effects on fertility
Target Organs: Testes

Effects on foetal development : Test Type: Development
Species: Mouse
Application Route: oral (gavage)
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Skeletal malformations
Remarks: Maternal toxicity observed.

Test Type: Development
Species: Rat, female
Developmental Toxicity: NOAEL: 10 mg/kg body weight
Symptoms: No effects on foetal development

Test Type: Development
Species: Rabbit, female
Application Route: oral (gavage)
Developmental Toxicity: NOAEL: 16 mg/kg body weight
Symptoms: No effects on foetal development

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Formaldehyde:

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

Methanol:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Mouse
Application Route: Ingestion
Result: positive
Remarks: The effects were seen only at maternally toxic doses.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

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

STOT - single exposure

Not classified based on available information.

Components:

deltamethrin (ISO):

Assessment : May cause respiratory irritation.

Formaldehyde:

Assessment : May cause respiratory irritation.

Methanol:

Target Organs : Eye, Central nervous system
Assessment : Causes damage to organs.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

deltamethrin (ISO):

Exposure routes : Ingestion
Target Organs : Central nervous system, Immune system
Assessment : Causes damage to organs through prolonged or repeated exposure.

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Central nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.

Formaldehyde:

Exposure routes : inhalation (gas)
Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Repeated dose toxicity

Components:

deltamethrin (ISO):

Species : Rat, male and female
NOAEL : 1 mg/kg
LOAEL : 2.5 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Nervous system
Symptoms : hyperexcitability

Species : Rat
LOAEL : 3 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 wk / 5 d/wk / 6 h/d
Symptoms : Local irritation, respiratory tract irritation

Species : Dog
NOAEL : 0.1 mg/kg
LOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Nervous system
Symptoms : Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, Salivation

Species : Rat
NOAEL : 14 mg/kg
LOAEL : 54 mg/kg
Application Route : Oral
Exposure time : 91 d
Target Organs : Nervous system

Species : Mouse
LOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 12 Weeks
Target Organs : Immune system
Symptoms : immune system effects

Formaldehyde:

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

Methanol:

Species : Rat
NOAEL : 1.06 mg/l

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Application Route : inhalation (vapour)
Exposure time : 90 Days

Propylene glycol:

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

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

deltamethrin (ISO):

Inhalation : Symptoms: respiratory tract irritation, Dizziness, Sweating, Headache, Nausea, Vomiting, anorexia, Fatigue, tingling, Palpitation, Blurred vision, muscle twitching
Skin contact : Symptoms: Skin irritation, Erythema, pruritis, Headache, Nausea, Vomiting, Dizziness, tingling, Sweating, muscle twitching, Blurred vision, Fatigue, anorexia, Allergic reactions
Ingestion : Symptoms: muscle pain, Small pupils

SECTION 12: Ecological information

12.1 Toxicity

Components:

deltamethrin (ISO):

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048 mg/l
Exposure time: 96 h
LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates : EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 μ g/l
Exposure time: 48 h
EC50 (Daphnia magna (Water flea)): 0.0035 mg/l
Exposure time: 48 h
LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 μ g/l
Exposure time: 96 h
Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic toxicity) : 1,000,000

Toxicity to fish (Chronic toxicity) : NOEC: 0.000022 mg/l
Exposure time: 36 d
Species: Pimephales promelas (fathead minnow)

NOEC: 0.000017 mg/l
Exposure time: 260 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.0041 µg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1,000,000

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 microorganisms : EC50 : 34.1 mg/l
Exposure time: 120 h

Toxicity to fish (Chronic toxicity) : NOEC: >= 48 mg/l
Exposure time: 28 d
Species: Oryzias latipes (Orange-red killifish)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: >= 6.4 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Nonylphenol, ethoxylated:

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 (Ceriodaphnia dubia (water flea)): > 0.1 - 1 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Selenastrum capricornutum (green algae)): > 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: > 0.1 - 1 mg/l
Exposure time: 100 d
Species: *Oryzias latipes* (Japanese medaka)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.001 - 0.01 mg/l
Exposure time: 28 d
Species: *Mysidopsis bahia* (opossum shrimp)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

Methanol:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 15,400 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 22,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : IC50 : > 1,000 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 15,800 mg/l
Exposure time: 200 h
Species: *Oryzias latipes* (Orange-red killifish)

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

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

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 microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 13,020 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)

12.2 Persistence and degradability

Components:

deltamethrin (ISO):

Stability in water : Hydrolysis: 0 %(30 d)

Formaldehyde:

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

Nonylphenol, ethoxylated:

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

Methanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 20 d

Propylene glycol:

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

12.3 Bioaccumulative potential

Components:

deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,800

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

Partition coefficient: n-octanol/water : log Pow: 4.6

Formaldehyde:

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

Nonylphenol, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4.48

Methanol:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water : log Pow: -0.77

Propylene glycol:

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

12.4 Mobility in soil

Components:

deltamethrin (ISO):

Distribution among environmental compartments : log Koc: 7.2

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Endocrine disrupting properties

Product:

Assessment : This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Components:

Nonylphenol, ethoxylated:

Assessment : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environ-

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

ment.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- | | | |
|------------------------|---|--|
| Product | : | Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer. |
| 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

14.1 UN number

- | | | |
|------|---|---------|
| ADN | : | UN 3082 |
| ADR | : | UN 3082 |
| RID | : | UN 3082 |
| IMDG | : | UN 3082 |
| IATA | : | UN 3082 |

14.2 UN proper shipping name

- | | | |
|------|---|---|
| ADN | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(deltamethrin (ISO)) |
| ADR | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(deltamethrin (ISO)) |
| RID | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(deltamethrin (ISO)) |
| IMDG | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(deltamethrin (ISO)) |
| IATA | : | Environmentally hazardous substance, liquid, n.o.s.
(deltamethrin (ISO)) |

14.3 Transport hazard class(es)

Class	Subsidiary risks
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SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

ADN : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADN
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)
Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Nonylphenol, ethoxylated (Number on list 46b, 46a.) Formaldehyde (Number on list 72, 28) Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Nonylphenol, ethoxylated
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Nonylphenol, ethoxylated
GB Export and import of hazardous chemicals - Prior	:	Nonylphenol, ethoxylated

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

Informed Consent (PIC) Regulation
Control of Major Accident Hazards Regulations 2015 (COMAH)

E1	ENVIRONMENTAL HAZARDS	Quantity 1 100 t	Quantity 2 200 t
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Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

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

AICS : not determined

DSL : not determined

IECSC : not determined

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-Statements

H221 : Flammable gas.
H225 : Highly flammable liquid and vapour.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H330 : Fatal if inhaled.
H331 : Toxic if inhaled.
H335 : May cause respiratory irritation.
H341 : Suspected of causing genetic defects.
H350 : May cause cancer.
H361fd : Suspected of damaging fertility. Suspected of damaging the unborn child.
H370 : Causes damage to organs.
H372 : Causes damage to organs through prolonged or repeated exposure if inhaled.
H372 : Causes damage to organs through prolonged or repeated

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version 3.1 Revision Date: 03.11.2023 SDS Number: 10853342-00005 Date of last issue: 30.09.2023
Date of first issue: 15.09.2022

H400 : exposure if swallowed.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Carc. : Carcinogenicity
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Gas : Flammable gases
Flam. Liq. : Flammable liquids
Muta. : Germ cell mutagenicity
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
2006/15/EC : Europe. Indicative occupational exposure limit values
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
2004/37/EC / STEL : Short term exposure limit
2004/37/EC / TWA : Long term exposure limit
2006/15/EC / TWA : Limit Value - eight hours
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



Deltamethrin (1%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
3.1	03.11.2023	10853342-00005	Date of first issue: 15.09.2022

tative) 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

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/>

Classification of the mixture:

Skin Sens. 1	H317
Carc. 1B	H350
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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.

GB / EN