

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

1.1 Product identifier

Trade name : Ethion / Deltamethrin Formulation
Other means of identification : COOPERS TIXAFLY CATTLE DIP AND SPRAY (45981)

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

Use of the Substance/Mixture : Veterinary product
Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa
Telephone : +27119239300
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)

Acute toxicity, Category 3	H301: Toxic if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.
Specific target organ toxicity - single exposure, Category 3	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Cat-	H410: Very toxic to aquatic life with long lasting

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version
1.0

Revision Date:
29.09.2025

SDS Number:
11581575-00001

Date of last issue: -
Date of first issue: 29.09.2025

egory 1

Endocrine disruptor for environment,
Category 1

effects.

EUH430: May cause endocrine disruption in the
environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

: Danger

Hazard statements

: H301 + H311 Toxic if swallowed or in contact with skin.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or re-peated exposure.
H410 Very toxic to aquatic life with long lasting effects.
EUH430 May cause endocrine disruption in the environment.

Supplemental Hazard Statements

: EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

: **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

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

Hazardous components which must be listed on the label:

Ethion / Deltamethrin Formulation

Version
1.0

Revision Date:
29.09.2025

SDS Number:
11581575-00001

Date of last issue: -
Date of first issue: 29.09.2025

Hydrocarbons, C10, aromatics, <1% naphthalene
Ethion
Nonylphenol, ethoxylated
deltamethrin (ISO)

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)
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 50 - < 70
Ethion	563-12-2 209-242-3 015-047-00-2	Acute Tox. 2; H300 Acute Tox. 2; H330 Acute Tox. 2; H310 STOT SE 1; H370 (Central nervous system) STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10.000 M-Factor (Chronic aquatic toxicity): 10.000	>= 10 - < 20
Nonylphenol, ethoxylated	9016-45-9	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ED ENV 1; EUH430	>= 3 - < 10

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version
1.0

Revision Date:
29.09.2025

SDS Number:
11581575-00001

Date of last issue: -
Date of first issue: 29.09.2025

		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	
Calcium dodecylbenzenesulphonate	26264-06-2 247-557-8	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 3 - < 10
Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether	37251-69-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 2,5 - < 10
deltamethrin (ISO)	52918-63-5 258-256-6 607-319-00-X	Acute Tox. 3; H301 Acute Tox. 3; H331 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 M-Factor (Acute aquatic toxicity): 1.000.000 M-Factor (Chronic aquatic toxicity): 1.000.000	>= 2,5 - < 3
2-Ethylhexan-1-ol	104-76-7 203-234-3	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 Aquatic Chronic 3; H412	>= 1 - < 2,5

For explanation of abbreviations see section 16.

Ethion / Deltamethrin FormulationVersion
1.0Revision Date:
29.09.2025SDS Number:
11581575-00001Date of last issue: -
Date of first issue: 29.09.2025**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.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Toxic if swallowed or in contact with skin.
May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye damage.
Harmful if inhaled.
May cause drowsiness or dizziness.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Repeated exposure may cause skin dryness or cracking.
- 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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

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
Sulphur oxides
Oxides of phosphorus
Metal oxides
Sulphur 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.
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.
Local authorities should be advised if significant spillages

Ethion / Deltamethrin FormulationVersion
1.0Revision Date:
29.09.2025SDS Number:
11581575-00001Date of last issue: -
Date of first issue: 29.09.2025

cannot be contained.

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.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.
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. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations.

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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
Ethion	563-12-2	TWA	4 µg/m3 (OEB 4)	Internal
	Further information: Skin			
deltamethrin (ISO)	52918-63-5	Wipe limit	40 µg/100 cm ²	Internal
	Further information: DSEN, Skin			
2-Ethylhexan-1-ol	104-76-7	TWA	100 µg/100 cm ² 1 ppm 5,4 mg/m3	2017/164/EU

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrocarbons, C10, aromatics, <1% naphthalene	Workers	Inhalation	Long-term systemic effects	151 mg/m3
	Workers	Skin contact	Long-term systemic effects	12,5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Skin contact	Long-term systemic effects	7,5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	7,5 mg/kg bw/day
Calcium dodecylbenzenesulphonate	Workers	Inhalation	Long-term systemic effects	52 mg/m3
	Workers	Inhalation	Acute systemic effects	52 mg/m3
	Workers	Inhalation	Long-term local effects	52 mg/m3
	Workers	Inhalation	Acute local effects	52 mg/m3
	Workers	Skin contact	Long-term systemic effects	57,2 mg/kg bw/day
	Workers	Skin contact	Acute systemic ef-	80 mg/kg

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version
1.0

Revision Date:
29.09.2025

SDS Number:
11581575-00001

Date of last issue: -
Date of first issue: 29.09.2025

			fects	bw/day
	Workers	Skin contact	Long-term local effects	1,57 mg/kg bw/day
	Workers	Skin contact	Acute local effects	1,57 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	26 mg/m3
	Consumers	Inhalation	Acute systemic effects	26 mg/m3
	Consumers	Inhalation	Acute local effects	26 mg/m3
	Consumers	Inhalation	Long-term local effects	26 mg/m3
	Consumers	Skin contact	Long-term systemic effects	28,6 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	40 mg/kg bw/day
	Consumers	Skin contact	Acute local effects	0,787 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0,787 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	13 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	13 mg/kg bw/day
2-Ethylhexan-1-ol	Workers	Inhalation	Long-term systemic effects	12,8 mg/m3
	Workers	Inhalation	Long-term local effects	53,2 mg/m3
	Workers	Inhalation	Acute local effects	53,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	23 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2,3 mg/m3
	Consumers	Inhalation	Long-term local effects	26,6 mg/m3
	Consumers	Inhalation	Acute local effects	26,6 mg/m3
	Consumers	Skin contact	Long-term systemic effects	11,4 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1,1 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Calcium dodecylbenzenesulphonate	Fresh water	0,28 mg/l
	Freshwater - intermittent	0,654 mg/l
	Marine water	0,458 mg/l
	Sewage treatment plant	50 mg/l
	Fresh water sediment	27,5 mg/kg dry weight (d.w.)
	Marine sediment	2,75 mg/kg dry weight (d.w.)
	Air	10 mg/m3
	Soil	25 mg/kg dry

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

		weight (d.w.)
2-Ethylhexan-1-ol	Oral	20 mg/kg food
	Fresh water	27,8 µg/l
	Freshwater - intermittent	171 µg/l
	Marine water	2,78 µg/l
	Marine water - intermittent	17,1 µg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,272 mg/kg dry weight (d.w.)
	Marine sediment	0,0272 mg/kg dry weight (d.w.)
	Soil	0,0382 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

The information below is intended for larger pilot/commercial-scale operations and manufacturing. For smaller scale, clinical, or pharmacy settings, site-specific internal risk assessment practices should be conducted to determine appropriate exposure control measures. The health hazard risks of handling this material are dependent on multiple factors, including but not limited to physical form and quantity handled. If applicable, use process enclosures, local exhaust ventilation (e.g., Biosafety Cabinet, Ventilated Balance Enclosures), or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels as low as reasonably achievable.

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Essentially no open handling permitted.

Use closed processing systems or containment technologies.

If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not exist, handle over lined trays or benchtops.

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.

Filter type : Combined particulates and organic vapour type (A-P)

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state	:	liquid
Form	:	liquid
Colour	:	Colorless to pale yellow
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
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	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

9.2 Other information

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.

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

Toxic if swallowed or in contact with skin.
Harmful if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate: 90,5 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 2,85 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 455,55 mg/kg
Method: Calculation method

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

- Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 420
Remarks: Based on data from similar materials
- Acute inhalation toxicity : LC50 (Rat): > 4,778 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Ethion:

- Acute oral toxicity : LD50 (Rat): 13 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 0,450 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 (Rat): 62 mg/kg

Nonylphenol, ethoxylated:

- Acute oral toxicity : LD50 (Rat): 500 - 2.000 mg/kg

Calcium dodecylbenzenesulphonate:

- Acute oral toxicity : LD50 (Rat): > 500 - 2.000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

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

deltamethrin (ISO):

- Acute oral toxicity : LD50 (Rat): 66,7 mg/kg
LD50 (Rat): 9 - 139 mg/kg
- LD50 (Mouse): 19 - 34 mg/kg

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

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
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

2-Ethylhexan-1-ol:

Acute oral toxicity : LD50 (Rat, male): 2.047 mg/kg
Method: OECD Test Guideline 401
Remarks: The test was conducted equivalent or similar to guideline

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Acute dermal toxicity : LD50 (Rat): > 3.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: The test was conducted according to guideline

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

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

Assessment : Repeated exposure may cause skin dryness or cracking.

Ethion:

Species : Rabbit
Result : Mild skin irritation

Nonylphenol, ethoxylated:

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

Calcium dodecylbenzenesulphonate:

Species : Rabbit
Method : OECD Test Guideline 404

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Result : Skin irritation
Remarks : Based on data from similar materials

deltamethrin (ISO):

Species : Rabbit
Result : No skin irritation

2-Ethylhexan-1-ol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : The test was conducted according to guideline

Serious eye damage/eye irritation

Causes serious eye damage.

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

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Ethion:

Result : No eye irritation

Nonylphenol, ethoxylated:

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

Calcium dodecylbenzenesulphonate:

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

deltamethrin (ISO):

Species : Rabbit
Result : Moderate eye irritation

2-Ethylhexan-1-ol:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritation to eyes, reversing within 21 days
Remarks : The test was conducted according to guideline

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

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

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

Ethion:

Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Nonylphenol, ethoxylated:

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

Calcium dodecylbenzenesulphonate:

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

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

Germ cell mutagenicity

Not classified based on available information.

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

- Genotoxicity in vitro : Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative
Remarks: Based on data from similar materials
- Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

Ethion:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative
- Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative
- Test Type: in vitro micronucleus test
Result: positive
- Genotoxicity in vivo : Test Type: Chromosomal aberration
Species: Rat
Result: negative
- Test Type: In vivo micronucleus test
Species: Mouse
Result: positive
- Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Nonylphenol, ethoxylated:

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

Calcium dodecylbenzenesulphonate:

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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo

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

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

2-Ethylhexan-1-ol:

Genotoxicity in vitro

: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: The test was conducted according to guideline

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Remarks: The test was conducted equivalent or similar to guideline

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Remarks: The test was conducted equivalent or similar to guideline

Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: The test was conducted equivalent or similar to guideline
----------------------	---	---

Carcinogenicity

Not classified based on available information.

Components:**Ethion:**

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	18 Months
Result	:	negative
Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	24 Months
Result	:	negative

deltamethrin (ISO):

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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

NOAEL : 1 mg/kg body weight
Result : negative

2-Ethylhexan-1-ol:

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Method : OECD Test Guideline 451
Result : negative
Remarks : The test was conducted equivalent or similar to guideline

Reproductive toxicity

Not classified based on available information.

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Ethion:

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

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

Calcium dodecylbenzenesulphonate:

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

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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

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
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.

2-Ethylhexan-1-ol:

Effects on fertility

: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

Result: negative
Remarks: The test was conducted according to guideline
Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: The test was conducted equivalent or similar to guideline

STOT - single exposure

May cause drowsiness or dizziness.
Causes damage to organs.

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:

Assessment : May cause drowsiness or dizziness.
Remarks : Based on data from similar materials

Ethion:

Assessment : Causes damage to organs.

deltamethrin (ISO):

Assessment : May cause respiratory irritation.

2-Ethylhexan-1-ol:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Components:

Ethion:

Target Organs : Central nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.

Calcium dodecylbenzenesulphonate:

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

deltamethrin (ISO):

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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

Repeated dose toxicity

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

Ethion:

Species : Dog
NOAEL : 0,05 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Calcium dodecylbenzenesulphonate:

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

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

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

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

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

2-Ethylhexan-1-ol:

Species	:	Rat
NOAEL	:	250 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408
Remarks	:	The test was conducted according to guideline

Aspiration toxicity

May be fatal if swallowed and enters airways.

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

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

Experience with human exposure**Components:****Ethion:**

Ingestion : Symptoms: Blurred vision, Dizziness, Headache

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,

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

Ingestion : Blurred vision, Fatigue, anorexia, Allergic reactions
: Symptoms: muscle pain, Small pupils

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 - 10 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Ethion:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,18 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 : 0,056 - 7,7 µg/l
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 10.000

M-Factor (Chronic aquatic toxicity) : 10.000

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

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l
Exposure time: 72 h

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

Calcium dodecylbenzenesulphonate:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): > 0,1 - 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: > 0,1 - 1 mg/l
Exposure time: 28 d
Species: Pimephales promelas (fathead minnow)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 1 mg/l
Exposure time: 21 d

Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

ic toxicity) Species: Daphnia magna (Water flea)
Remarks: Based on data from similar materials

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 microorganisms : EC10 (activated sludge): > 1 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

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

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 : EC50 (Mysidopsis bahia (opossum shrimp)): 0,0037 µg/l

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

aquatic invertebrates	Exposure time: 48 h EC50 (Daphnia magna (Water flea)): 0,0035 mg/l Exposure time: 48 h LC50 (Gammarus fasciatus (freshwater shrimp)): 0,0003 µg/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 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
2-Ethylhexan-1-ol:	
Toxicity to fish	: LC50 (Leuciscus idus (Golden orfe)): 17,1 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1. Remarks: The test was conducted according to guideline
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 39 mg/l Exposure time: 48 h Method: Directive 67/548/EEC, Annex V, C.2. Remarks: The test was conducted according to guideline
Toxicity to algae/aquatic plants	: ErC50 (Desmodesmus subspicatus (green algae)): 13,3 mg/l Exposure time: 72 h EC10 (Desmodesmus subspicatus (green algae)): 1,3 mg/l Exposure time: 72 h
Toxicity to microorganisms	: NOEC (activated sludge): > 300 mg/l Exposure time: 24 h
Toxicity to fish (Chronic toxicity)	: EC10: 0,278 mg/l Exposure time: 30 d Species: Danio rerio (zebra fish)

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Method: OECD Test Guideline 210
Remarks: The test was conducted according to guideline

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 1,53 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: The test was conducted according to guideline

12.2 Persistence and degradability

Components:

Hydrocarbons, C10, aromatics, <1% naphthalene:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 49,56 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Ethion:

Biodegradability : Result: not rapidly degradable

Nonylphenol, ethoxylated:

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

Calcium dodecylbenzenesulphonate:

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

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

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

deltamethrin (ISO):

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

2-Ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 79 - 99,9 %
Exposure time: 14 d
Method: OECD Test Guideline 301C
Remarks: The test was conducted equivalent or similar to guideline

12.3 Bioaccumulative potential

Components:

Ethion:

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

Partition coefficient: n-octanol/water : log Pow: 5,07

Nonylphenol, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4,48

Calcium dodecylbenzenesulphonate:

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

Partition coefficient: n-octanol/water : log Pow: 4,77
Remarks: Calculation

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

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

deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1.800

Partition coefficient: n-octanol/water : log Pow: 4,6

2-Ethylhexan-1-ol:

Partition coefficient: n-octanol/water : log Pow: 2,9
Method: OECD Test Guideline 117
Remarks: The test was conducted according to guideline

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 Other adverse effects**Product:**

Endocrine disrupting potential : 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.

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

Components:

Nonylphenol, ethoxylated:

Endocrine disrupting potential : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

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 2810
ADR	: UN 2810
RID	: UN 2810
IMDG	: UN 2810
IATA	: UN 2810

14.2 UN proper shipping name

ADN	: TOXIC LIQUID, ORGANIC, N.O.S. (Ethion, deltamethrin (ISO))
ADR	: TOXIC LIQUID, ORGANIC, N.O.S. (Ethion, deltamethrin (ISO))
RID	: TOXIC LIQUID, ORGANIC, N.O.S. (Ethion, deltamethrin (ISO))
IMDG	: TOXIC LIQUID, ORGANIC, N.O.S. (Ethion, deltamethrin (ISO))
IATA	: Toxic liquid, organic, n.o.s. (Ethion, deltamethrin (ISO))

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 6.1	
ADR	: 6.1	

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

RID : 6.1

IMDG : 6.1

IATA : 6.1

14.4 Packing group

ADN

Packing group : III
Classification Code : T1
Hazard Identification Number : 60
Labels : 6.1

ADR

Packing group : III
Classification Code : T1
Hazard Identification Number : 60
Labels : 6.1
Tunnel restriction code : (E)

RID

Packing group : III
Classification Code : T1
Hazard Identification Number : 60
Labels : 6.1

IMDG

Packing group : III
Labels : 6.1
EmS Code : F-A, S-A

IATA (Cargo)

Packing instruction (cargo aircraft) : 663
Packing instruction (LQ) : Y642
Packing group : III
Labels : Toxic

IATA (Passenger)

Packing instruction (passenger aircraft) : 655
Packing instruction (LQ) : Y642
Packing group : III
Labels : Toxic

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version 1.0 Revision Date: 29.09.2025 SDS Number: 11581575-00001 Date of last issue: - Date of first issue: 29.09.2025

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

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

AICS : not determined
CA. 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

EUH430 : May cause endocrine disruption in the environment.
H300 : Fatal if swallowed.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H310 : Fatal in contact with skin.
H315 : Causes skin irritation.
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.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H336 : May cause drowsiness or dizziness.
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.

Ethion / Deltamethrin Formulation

Version 1.0	Revision Date: 29.09.2025	SDS Number: 11581575-00001	Date of last issue: - Date of first issue: 29.09.2025
----------------	------------------------------	-------------------------------	--

H372	: Causes damage to organs through prolonged or repeated exposure if inhaled.
H372	: Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful 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
Asp. Tox.	: Aspiration hazard
ED ENV	: Endocrine disruptor for environment
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Repr.	: Reproductive toxicity
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2017/164/EU	: Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
2017/164/EU / TWA	: Limit Value - eight hours

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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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; 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

SAFETY DATA SHEET



Ethion / Deltamethrin Formulation

Version
1.0

Revision Date:
29.09.2025

SDS Number:
11581575-00001

Date of last issue: -
Date of first issue: 29.09.2025

- 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:

Acute Tox. 3	H301
Acute Tox. 4	H332
Acute Tox. 3	H311
Eye Dam. 1	H318
Skin Sens. 1	H317
STOT SE 1	H370
STOT SE 3	H336
STOT RE 1	H372
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410
ED ENV 1	EUH430

Classification procedure:

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.

ZA / EN