according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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

1.1 Product identifier

Trade name : Deltamethrin (3%) Formulation

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

Use of the Sub- : Ve

stance/Mixture

: Veterinary product

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

Kilsheelan

Clonmel Tipperary, IE

Telephone : 353-51-601000

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)

Flammable liquids, Category 3 H226: Flammable liquid and vapour. Acute toxicity, Category 4 H302: Harmful if swallowed.

Acute toxicity, Category 4 H332: Harmful if swallowed.

Acute toxicity, Category 4 H332: Harmful if inhaled.

Acute toxicity, Category 4 H312: Harmful in contact with skin. Skin irritation, Category 2 H315: Causes skin irritation.

Serious eye damage, Category 1 H318: Causes serious eye damage. Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Reproductive toxicity, Category 2 H361fd: Suspected of damaging fertility. Suspected

of damaging the unborn child.

H335: May cause respiratory irritation.

Specific target organ toxicity - single ex-

posure, Category 3

Specific target organ toxicity - repeated

exposure, Category 2

Aspiration hazard, Category 1

H373: May cause damage to organs through pro-

longed or repeated exposure.

H304: May be fatal if swallowed and enters air-

ways.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Short-term (acute) aquatic hazard, Cate-

gory 1

Long-term (chronic) aquatic hazard, Cat-

egory 1

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting

effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :











Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 + H312 + H332 Harmful if swallowed, in contact with

skin or if inhaled.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

H361fd Suspected of damaging fertility. Suspected of

damaging the unborn child.

H373 May cause damage to organs through prolonged

or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P210 Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

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.

P391 Collect spillage.

Hazardous components which must be listed on the label:

Xylene Calcium dodecylbenzenesulphonate Nonylphenol, ethoxylated deltamethrin (ISO)

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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.

Ecological information: 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.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 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). Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Xylene	1330-20-7 215-535-7 601-022-00-9	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 (Auditory system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412 Acute toxicity estimate Acute inhalation toxicity (vapour): 11 mg/l Acute dermal toxicity: 1,100 mg/kg	>= 70 - < 90
Calcium dodecylbenzenesulpho- nate	26264-06-2 247-557-8	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412 Acute toxicity estimate	>= 3 - < 10

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Nonylphenol, ethoxylated	9016-45-9	Acute oral toxicity: 500 mg/kg Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 3 - < 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 Acute 1; H410 M-Factor (Acute aquatic toxicity): 1,000,000 M-Factor (Chronic aquatic toxicity): 1,000,000	>= 3 - < 10
2,6-Di-tert-butyl-p-cresol	128-37-0 204-881-4	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——— M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 1 - < 2.5

For explanation of abbreviations see section 16.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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 ad-

vice 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 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 : Harmful if swallowed, in contact with skin or if inhaled.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

Suspected of damaging fertility. Suspected of damaging the

unborn child.

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Do not use a solid water stream as it may scatter and spread

fire.

Flash back possible over considerable distance. Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx) Bromine compounds

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 meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

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

SO.

Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective 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.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapours/mists with a water

spray jet.

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 absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

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.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

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 as-

sessment

Non-sparking tools should be used. Keep container tightly closed.

Already sensitised individuals, and those susceptible

to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respira-

tory irritants or sensitisers.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Take precautionary measures against static discharges. 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. Keep

away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures, which in contact with water, emit

flammable gases

Explosives Gases

Very acutely toxic substances and mixtures

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
Xylene	1330-20-7	OELV - 8 hrs (TWA)	50 ppm 221 mg/m3	IE OEL
			which have the capacity to pe ith it, and be absorbed into th	
		OELV - 15 min (STEL)	100 ppm 442 mg/m3	IE OEL

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

	Further information: Substances which have the capacity to penetrate intact			
	skin when they come in contact with it, and be absorbed into the body			
		TWA	50 ppm 221 mg/m3	2000/39/EC
	Further inform	nation: Identifies the	possibility of significant uptak	ce through the
	skin, Indicativ	е	· · · · · · · · · · · · · · · · · · ·	
		STEL	100 ppm	2000/39/EC
			442 mg/m3	
	Further information: Identifies the possibility of significant uptake through the			
	skin, Indicative			
deltamethrin (ISO)	52918-63-5	TWA	15 μg/m3 (OEB 3)	Internal
	Further information: DSEN, Skin			
		Wipe limit	100 μg/100 cm ²	Internal
2,6-Di-tert-butyl-p- cresol	128-37-0	OELV - 8 hrs (TWA)	2 mg/m3	IE OEL

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3
	Workers	Inhalation	Acute systemic effects	442 mg/m3
	Workers	Inhalation	Long-term local ef- fects	221 mg/m3
	Workers	Inhalation	Acute local effects	442 mg/m3
	Workers	Skin contact	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65.3 mg/m3
	Consumers	Inhalation	Acute systemic effects	260 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	65.3 mg/m3
	Consumers	Inhalation	Acute local effects	260 mg/m3
	Consumers	Skin contact	Long-term systemic effects	125 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12.5 mg/kg bw/day
2,6-Di-tert-butyl-p- cresol	Workers	Inhalation	Long-term systemic effects	3.5 mg/m3
	Workers	Dermal	Long-term systemic effects	0.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.86 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.25 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.25 mg/kg bw/day
Calcium dodecylben- zenesulphonate	Workers	Inhalation	Long-term systemic effects	52 mg/m3

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Workers	Inhalation	Acute systemic effects	52 mg/m3
Workers	Inhalation	Long-term local ef- fects	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 effects	80 mg/kg bw/day
Workers	Skin contact	Long-term local ef- fects	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 ef- fects	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 ef- fects	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

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

Substance name	Environmental Compartment	Value
Xylene	Fresh water	0.327 mg/l
	Intermittent use/release	0.327 mg/l
	Marine water	0.327 mg/l
	Sewage treatment plant	6.58 mg/l
	Fresh water sediment	12.46 mg/kg dry weight (d.w.)
	Marine sediment	12.46 mg/kg dry weight (d.w.)
	Soil	2.31 mg/kg dry weight (d.w.)
2,6-Di-tert-butyl-p-cresol	Fresh water	0.199 μg/l
	Intermittent use/release	0.02 μg/l
	Marine water	0.02 μg/l
	Sewage treatment plant	0.17 mg/l
	Fresh water sediment	0.0996 mg/kg dry weight (d.w.)
	Marine sediment	0.00996 mg/kg

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

		dry weight (d.w.)
	Soil	0.04769 mg/kg
		dry weight (d.w.)
	Oral (Secondary Poisoning)	8.33 mg/kg food
Calcium dodecylbenzenesulpho-	Fresh water	0.28 mg/l
nate		
	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
		weight (d.w.)
	Oral	20 mg/kg food

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.

Use explosion-proof electrical, ventilating and lighting equipment.

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. Take note that the product is flam-

mable, which may impact the selection of hand protection.

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, dis-

posable 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 expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Equipment should conform to I.S. EN 14387

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : yellow

Odour : No data available

Odour Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

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

Flash point : 45 - 51 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 4-5

Viscosity

Viscosity, kinematic : No data available

Solubility(ies)

Water solubility : soluble

Partition coefficient: n-

octanol/water

: Not applicable

Vapour pressure : No data available

Relative density : No data available

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

Density : No data available

Relative vapour density : No data available

Particle characteristics

Particle size : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Molecular weight : No data available

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 : Flammable liquid and vapour.

Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of : Inhalation exposure Skin contact

Ingestion
Eye contact

Acute toxicity

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

Product:

Acute oral toxicity : Acute toxicity estimate: 1,291 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 1,347 mg/kg

Method: Calculation method

Components:

Xylene:

Acute oral toxicity : LD50 (Rat): 3,523 mg/kg

Method: Directive 67/548/EEC, Annex V, B.1.

Acute inhalation toxicity : Acute toxicity estimate: 11 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: 1,100 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

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

Nonylphenol, ethoxylated:

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

Acute inhalation toxicity : LC50 (Rat): 0.8 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

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

2,6-Di-tert-butyl-p-cresol:

Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg

Method: OECD Test Guideline 401

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

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Causes skin irritation.

Components:

Xylene:

Species : Rabbit Result : Skin irritation

Calcium dodecylbenzenesulphonate:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Remarks : Based on data from similar materials

Nonylphenol, ethoxylated:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

deltamethrin (ISO):

Species : Rabbit

Result : No skin irritation

2,6-Di-tert-butyl-p-cresol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Remarks : Based on data from similar materials

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Xylene:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Calcium dodecylbenzenesulphonate:

Species : Rabbit

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

Nonylphenol, ethoxylated:

Species : Rabbit

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

deltamethrin (ISO):

Species : Rabbit

Result : Moderate eye irritation

2,6-Di-tert-butyl-p-cresol:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Remarks : Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Xylene:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact
Species : Mouse
Result : negative

Calcium dodecylbenzenesulphonate:

Test Type : Maximisation Test

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Exposure routes : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : negative

Remarks : Based on data from similar materials

Nonylphenol, ethoxylated:

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

2,6-Di-tert-butyl-p-cresol:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Skin contact
Species : Humans
Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Xylene:

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

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

Species: Mouse

Application Route: Skin contact

Result: negative

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

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

Nonylphenol, ethoxylated:

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

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 28.09.2024 7731634-00010 Date of first issue: 13.01.2021 4.0

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

2,6-Di-tert-butyl-p-cresol:

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

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Genotoxicity in vivo Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Rat

Application Route: Ingestion

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Xylene:

Species Rat Application Route Ingestion Exposure time : 103 weeks Result negative

deltamethrin (ISO):

Species Mouse, male and female

Application Route oral (feed) Exposure time 104 weeks

NOAEL 8 mg/kg body weight 4 mg/kg body weight LOAEL

positive Result Target Organs Lymph nodes

Species Rat, male and female

Application Route oral (feed)

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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

2,6-Di-tert-butyl-p-cresol:

Species : Rat
Application Route : Ingestion
Exposure time : 22 Months
Result : negative

Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Xylene:

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

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

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 develop-

ment

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

deltamethrin (ISO):

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

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 develop-

ment

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 - As-

sessment

Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

2,6-Di-tert-butyl-p-cresol:

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

Species: Rat

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

II

STOT - single exposure

May cause respiratory irritation.

Components:

Xylene:

Assessment : May cause respiratory irritation.

deltamethrin (ISO):

Assessment : May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Xylene:

Exposure routes : inhalation (vapour)
Target Organs : Auditory system

Assessment : Shown to produce significant health effects in animals at con-

centrations of >0.2 to 1 mg/l/6h/d.

Calcium dodecylbenzenesulphonate:

Assessment : No significant health effects observed in animals at concentra-

tions 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.

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

2,6-Di-tert-butyl-p-cresol:

Assessment : No significant health effects observed in animals at concentra-

tions of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

Xylene:

Species : Rat

LOAEL : > 0.2 - 1 mg/l

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Application Route : inhalation (vapour)

Exposure time : 13 Weeks

Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 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

Species: DogNOAEL: 0.1 mg/kgLOAEL: 1 mg/kgApplication Route: OralExposure time: 13 WeeksTarget Organs: Nervous system

Symptoms : Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, Saliva-

tion

Species : Rat

NOAEL : 14 mg/kg

LOAEL : 54 mg/kg

Application Route : Oral

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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

2,6-Di-tert-butyl-p-cresol:

Species : Rat

NOAEL : 25 mg/kg

Application Route : Ingestion

Exposure time : 22 Months

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Xylene:

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.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components consid-

ered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

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, Nau-

sea, Vomiting, Dizziness, tingling, Sweating, muscle twitching,

Blurred vision, Fatigue, anorexia, Allergic reactions

Ingestion : Symptoms: muscle pain, Small pupils

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

SECTION 12: Ecological information

12.1 Toxicity

Components:

Xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

: EC50 (Skeletonema costatum (marine diatom)): 10 mg/l

Exposure time: 72 h

Toxicity to microorganisms : NOEC : > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

NOEC: > 0.1 - < 1 mg/l

Exposure time: 35 d

Species: Danio rerio (zebra fish) Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EL10: > 1 - 10 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

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 tox-

icity)

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 (Chron-

ic toxicity)

NOEC: > 1 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Remarks: Based on data from similar materials

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

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 tox-

icity)

: 1

Toxicity to fish (Chronic tox-

icity)

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 (Chron-

ic 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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 28.09.2024 7731634-00010 Date of first issue: 13.01.2021 4.0

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 µg/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 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 tox- :

icity)

1,000,000

Toxicity to fish (Chronic tox-

icity)

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 (Chron-

ic toxicity)

NOEC: 0.0041 µg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

1,000,000

2,6-Di-tert-butyl-p-cresol:

Toxicity to fish LC50 (Danio rerio (zebra fish)): > 0.57 mg/l

Exposure time: 96 h

Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.48 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24

mg/l

Exposure time: 72 h

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

icity)

: 1

Toxicity to microorganisms : EC50 : > 10,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Toxicity to fish (Chronic tox-

icity)

NOEC: 0.053 mg/l

Exposure time: 30 d Species: Oryzias latipes (Japanese medaka)

Method: OECD Test Guideline 210

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 0.316 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic :

toxicity)

12.2 Persistence and degradability

Components:

Xylene:

Biodegradability : Result: Readily biodegradable.

1

Biodegradation: > 70 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Calcium dodecylbenzenesulphonate:

Biodegradability : Result: Readily biodegradable.

Remarks: Based on data from similar materials

Nonylphenol, ethoxylated:

Biodegradability : Result: Not readily biodegradable.

Remarks: Based on data from similar materials

deltamethrin (ISO):

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

2,6-Di-tert-butyl-p-cresol:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 4.5 %

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

Exposure time: 28 d

Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Components:

Xylene:

Partition coefficient: n- : log Pow: 3.16

octanol/water Remarks: Calculation

Calcium dodecylbenzenesulphonate:

Bioaccumulation : Bioconcentration factor (BCF): < 500

Remarks: Based on data from similar materials

Partition coefficient: n- : log Pow: 4.77

octanol/water Remarks: Calculation

Nonylphenol, ethoxylated:

2,6-Di-tert-butyl-p-cresol:

Partition coefficient: n- : log Pow: 4.48

octanol/water

deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 1,800

Partition coefficient: n- : log Pow: 4.6

octanol/water

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 330 - 1,800

Partition coefficient: n- : log Pow: 5.1

octanol/water

12.4 Mobility in soil

Components:

deltamethrin (ISO):

Distribution among environ- : log Koc: 7.2

mental compartments

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.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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-

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 han-

dling site for recycling or disposal.

Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 1993
ADR : UN 1993
RID : UN 1993
IMDG : UN 1993
IATA : UN 1993

14.2 UN proper shipping name

ADN : FLAMMABLE LIQUID, N.O.S.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

(Xylene)

ADR : FLAMMABLE LIQUID, N.O.S.

(Xylene)

RID : FLAMMABLE LIQUID, N.O.S.

(Xylene)

IMDG : FLAMMABLE LIQUID, N.O.S.

(Xylene, deltamethrin (ISO), 2,6-Di-tert-butyl-p-cresol)

IATA : Flammable liquid, n.o.s.

(Xylene)

14.3 Transport hazard class(es)

Class Subsidiary risks

ADN : 3
ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADN

Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

ADR

Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : (D/E)

RID

Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

IMDG

Packing group : III
Labels : 3
EmS Code : F-E, <u>S-E</u>

IATA (Cargo)

Packing instruction (cargo

aircraft)

Packing instruction (LQ) : Y344
Packing group : III

Labels : Flammable Liquids

366

31 / 36

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

IATA (Passenger)

Packing instruction (passen: 355

ger aircraft)

Packing instruction (LQ) : Y344
Packing group : III

Labels : Flammable Liquids

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

rid

Environmentally hazardous : yes

IMDG

Marine pollutant : 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 Maritime transport in bulk according to IMO instruments

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

Number on list 46b: Nonylphenol, ethoxylated

Number on list 46a.: Nonylphenol, ethoxylated

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

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

Nonylphenol, ethoxylated

Nonylphenol, ethoxylated

Nonylphenol, ethoxylated

not.

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Regulation (EC) on substances that deplete the ozone

layer

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

REACH - List of substances subject to authorisation

(Annex XIV)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances.

Quantity 1

Not applicable

Not applicable

Quantity 2

P5c FLAMMABLE LIQUIDS 5,000 t 50,000 t

E1 ENVIRONMENTAL 1

HAZARDS

100 t 200 t

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

H226 : Flammable liquid and vapour.

H301 : Toxic if swallowed. H302 : Harmful if swallowed.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version	Revision Date:	SE	S Number:	Date of last issue: 06.04.2024			
4.0	28.09.2024	77	31634-00010	Date of first issue: 13.01.2021			
H304		:	May be fatal if sw	vallowed and enters airways.			
H312		:	Harmful in contact with skin.				
H315		:	Causes skin irrita	ation.			
H317		:	May cause an all	ergic skin reaction.			
H318		:	Causes serious e	eye damage.			
H319		:	Causes serious e	eye irritation.			
H331		:	Toxic if inhaled.				
H332		:	Harmful if inhaled.				
H335		:	: May cause respiratory irritation.				
H361fd	I	:	: Suspected of damaging fertility. Suspected of damaging the unborn child.				
H372		:	: Causes damage to organs through prolonged or repeated exposure if inhaled.				
H372		:	: Causes damage to organs through prolonged or repeated exposure if swallowed.				
H373		:	: May cause damage to organs through prolonged or repeated exposure.				
H400		:	: Very toxic to aquatic life.				
H410		:	: Very 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 Eye Dam. : Serious eye damage

Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
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

2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first

list of indicative occupational exposure limit values

IE OEL : Ireland. List of Chemical Agents and Carcinogens with Occu-

pational Exposure Limit Values - Code of Practice, Schedule 1

and 2

2000/39/EC / TWA : Limit Value - eight hours 2000/39/EC / STEL : Short term exposure limit

IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min : Occupational exposure limit value (15-minute reference peri-

(STEL) od)

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 - Emergen-

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7731634-00010 Date of first issue: 13.01.2021

cy 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) 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

compile the Safety Data Sheet

Sources of key data used to : 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:

Classification procedure:

H226	Based on product data or assessment
H302	Calculation method
H332	Calculation method
H312	Calculation method
H315	Calculation method
H318	Calculation method
H317	Calculation method
H361fd	Calculation method
H335	Calculation method
H373	Calculation method
H304	Calculation method
H400	Calculation method
H410	Calculation method
	H302 H332 H312 H315 H318 H317 H361fd H335 H373 H304 H400

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Deltamethrin (3%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 7731634-00010
 Date of first issue: 13.01.2021

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.

IE / EN