

## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

**SECTION 1: IDENTIFICATION** 

Product name : Deltamethrin (3%) Formulation

Manufacturer or supplier's details

Company : Intervet Australia Pty Limited (trading as MSD Animal Health)

Address : 91-105 Harpin Street

Bendigo 3550, Victoria Austrailia

Telephone : 1 800 033 461

Emergency telephone number : Poisons Information Centre: Phone 13 11 26

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

#### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri-

tation

Category 1

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity -

single exposure

Category 3

Specific target organ toxicity - :

repeated exposure

Category 2

Aspiration hazard : Category 1

**GHS** label elements



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

Hazard pictograms :









Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

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 damag-

ing the unborn child.

H373 May cause damage to organs through prolonged or re-

peated exposure.

Precautionary statements

#### Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist or vapours.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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 + P313 IF exposed or concerned: Get medical advice/



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

attention.

P331 Do NOT induce vomiting.

P333 + P313 If skin irritation or rash occurs: Get medical ad-

vice/ attention.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

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

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**

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Xylene	1330-20-7	>= 60 -<= 100
Calcium dodecylbenzenesulphonate	26264-06-2	>= 3 -< 10
Nonylphenol, ethoxylated	9016-45-9	>= 3 -< 10
deltamethrin (ISO)	52918-63-5	>= 3 -< 10
2,6-Di-tert-butyl-p-cresol	128-37-0	< 10

#### **SECTION 4. 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.

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, DO NOT induce vomiting.

If vomiting occurs have person lean forward.

Call a physician or poison control centre immediately.



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

Harmful if swallowed.

May be fatal if swallowed and enters airways.

delayed

Causes skin irritation.

May cause an allergic skin reaction.

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.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

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

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.

Ose water spray to coor unopened containers.

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

SO.

Evacuate area.

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Hazchem Code : •3Y



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

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).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

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

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

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.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

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.



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.

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

other ignition sources. No smoking.

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.

Conditions for safe storage : 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.

Materials to avoid : Do not store with the following product types:

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable gases Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Poisonous gases

**Explosives** 

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
		exposure)	concentration	
Xylene	1330-20-7	TWA	80 ppm 350 mg/m3	AU OEL
		STEL	150 ppm 655 mg/m3	AU OEL
		TWA	20 ppm	ACGIH



## **Deltamethrin (3%) Formulation**

Version **Revision Date:** SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

deltamethrin (ISO)	52918-63-5	TWA	15 μg/m3 (OEB 3)	Internal	
	Further inforr	Further information: DSEN, Skin			
		Wipe limit	100 μg/100 cm <sup>2</sup>	Internal	
2,6-Di-tert-butyl-p-cresol	128-37-0	TWA	10 mg/m3	AU OEL	
		TWA (Inhal-	2 mg/m3	ACGIH	
		able fraction			
		and vapor)			

### **Biological occupational exposure limits**

Components	CAS-No.	Control	Biological	Sam-	Permissible	Basis
		parameters	specimen	pling	concentra-	
				time	tion	
Xylene	1330-20-7	Methylhip- puric acids	Urine	End of shift (As soon as possible after exposure ceases)	0.3 g/g creatinine	ACGIH BEI

**Engineering measures** 

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless 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 con-

tainment devices). Minimize open handling.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Personal protective equipment

If adequate local exhaust ventilation is not available or expo-Respiratory protection

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection. Combined particulates and organic vapour type

Filter type 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.

Wear safety glasses with side shields or goggles. Eye protection

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.



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : yellow

Odour : No data available

Odour Threshold : No data available

pH : 4-5

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : 45 - 51 °C

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 : soluble

Partition coefficient: n-

octanol/water

: Not applicable

Auto-ignition temperature : No data available



# Deltamethrin (3%) Formulation

Date of last issue: 06.04.2024 Version **Revision Date:** SDS Number: 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

Decomposition temperature No data available

Viscosity

No data available Viscosity, kinematic

Explosive properties Not explosive

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

Molecular weight No data available

Particle characteristics

Particle size Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity Not classified as a reactivity hazard. Stable under normal conditions. Chemical stability

Possibility of hazardous reac-Flammable liquid and vapour.

tions

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

Conditions to avoid Heat, flames and sparks.

Incompatible materials Oxidizing agents

Hazardous decomposition No hazardous decomposition products are known.

products

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

Exposure routes Inhalation

Skin contact Ingestion Eye contact

**Acute toxicity** 

Harmful if swallowed.

**Product:** 

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

Method: Calculation method

Acute inhalation toxicity Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

**Components:** 

Xylene:

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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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

Acute inhalation toxicity : LC50 (Rat): 27.571 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 4,200 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

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

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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

#### 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

### 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

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

Remarks : Based on data from similar materials



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

Nonylphenol, ethoxylated:

Species : Rabbit

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

deltamethrin (ISO):

Species : Rabbit

Result : Moderate eye irritation

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

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

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 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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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

**Chronic toxicity** 

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)

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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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 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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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 LOAEL : 4 mg/kg body weight

Result : positive Target Organs : Lymph nodes

Species : Rat, male and female

Application Route : oral (feed)
Exposure time : 2 Years
Result : negative

Species : Dog, male and female

Application Route : oral (feed) Exposure time : 2 Years

NOAEL : 1 mg/kg body weight

Result : negative

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

Species : Rat Application Route : Ingestion



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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

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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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

STOT - single exposure

May cause respiratory irritation.

Components:

Xylene:

Assessment : May cause respiratory irritation.

deltamethrin (ISO):

Assessment : May cause respiratory irritation.



## **Deltamethrin (3%) Formulation**

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

 2.7
 28.09.2024
 7730558-00010
 Date of first issue: 13.01.2021

#### 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
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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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 : 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, Saliva-

tion

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

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



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

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.

#### **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

#### **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

#### **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 fish (Chronic tox-

icity)

: NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l

Exposure time: 35 d

Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l

aquatic invertebrates (Chron-

Exposure time: 21 d



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

ic toxicity) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

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

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): > 0.1 - 1

mg/l

Exposure time: 28 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): > 1 mg/l

Exposure time: 21 d

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

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 : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

plants 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

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l

Exposure time: 100 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01

mg/

Exposure time: 28 d

Remarks: Based on data from similar materials

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

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0.000022

mg/l

Exposure time: 36 d

NOEC (Pimephales promelas (fathead minnow)): 0.000017

mg/l

Exposure time: 260 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

NOEC (Daphnia magna (Water flea)): 0.0041 µg/l

Exposure time: 21 d



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 27.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

ic toxicity)

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

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): 0.053 mg/l

Exposure time: 30 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.316 mg/l

Exposure time: 21 d

Toxicity to microorganisms

EC50: > 10,000 mg/l Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Components:** 

Xylene:

Biodegradability : Result: Readily biodegradable.

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 (3%) Formulation**

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

 2.7
 28.09.2024
 7730558-00010
 Date of first issue: 13.01.2021

deltamethrin (ISO):

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

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

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 4.5 % Exposure time: 28 d

Method: OECD Test Guideline 301C

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:

Partition coefficient: n-

octanol/water

log Pow: 4.48

deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 1,800

Partition coefficient: n-

octanol/water

log Pow: 4.6

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

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 330 - 1,800

Partition coefficient: n-

octanol/water

log Pow: 5.1

Mobility in soil

**Components:** 

deltamethrin (ISO):

Distribution among environ-

mental compartments

log Koc: 7.2



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

#### Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste 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**

#### International Regulations

**UNRTDG** 

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(Xylene)

Class : 3
Packing group : III
Labels : 3
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 1993

Proper shipping name : Flammable liquid, n.o.s.

(Xylene)

Class : 3 Packing group : III

Labels : Flammable Liquids

Packing instruction (cargo : 366

aircraft)

Packing instruction (passen: 355

ger aircraft)

IMDG-Code

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

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

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : yes

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

#### **National Regulations**

ADG

UN number : UN 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

(Xylene)

Class : 3
Packing group : III
Labels : 3
Hazchem Code : •3Y
Environmentally hazardous : no

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### **SECTION 15. REGULATORY INFORMATION**

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

Therapeutic Goods (Poisons : Standard) Instrument

Schedule 7 (Please use the original publication to check for specific uses, specific conditions or threshold limits that might

apply for this chemical)

Prohibition/Licensing Requirements

There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regula-

tions

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

AICS : not determined

DSL : not determined

IECSC : not determined

#### **SECTION 16: ANY OTHER RELEVANT INFORMATION**

**Further information** 

Revision Date : 28.09.2024

Sources of key data used to

compile the Safety Data

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

Sheet

cy, http://echa.europa.eu/

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)



## **Deltamethrin (3%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 2.7 28.09.2024 7730558-00010 Date of first issue: 13.01.2021

ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

AU OEL : Australia. Workplace Exposure Standards for Airborne Con-

taminants.

ACGIH / TWA : 8-hour, time-weighted average

AU OEL / TWA : Exposure standard - time weighted average AU OEL / STEL : Exposure standard - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose): MARPOL - International Convention for the Prevention of Pollution from Ships: n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

AU / EN