

# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

**Section 1: Identification** 

**Product identifier** : Flumethrin (2%) Formulation

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

Manufacturer or supplier's details

Company : MSD

Address : 50 Tuas West Drive

Singapore - Singapore 638408

Telephone : +1-908-740-4000

Emergency telephone number : 65 6697 2111 (24/7/365)

E-mail address : EHSDATASTEWARD@msd.com

#### Section 2: Hazard identification

Classification of the substance or mixture

Acute toxicity (Oral) : Category 3

Acute toxicity (Dermal) : Category 2

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri-

tation

Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity - :

single exposure (Oral)

Category 2

Specific target organ toxicity - :

repeated exposure

Category 2 (Auditory system)

Specific target organ toxicity - :

repeated exposure (Oral)

Category 2

Aspiration hazard : Category 1

Long-term (chronic) aquatic

hazard

Category 2



# Flumethrin (2%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 06.04.2024
 10225132-00007
 Date of first issue: 12.11.2021

# GHS Label elements, including precautionary statements

Hazard pictograms







Signal word : Danger

Hazard statements : H301 Toxic if swallowed.

H304 May be fatal if swallowed and enters airways.

H310 Fatal in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H360D May damage the unborn child.

H371 May cause damage to organs if swallowed.

H373 May cause damage to organs through prolonged or re-

peated exposure if swallowed.

H373 May cause damage to organs (Auditory system) through

prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe mist or vapours.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash skin thoroughly after handling.

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

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection/ hearing protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor. Rinse mouth.

P302 + P352 + P310 IF ON SKIN: Wash with plenty of water.

Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

P308 + P311 IF exposed or concerned: Call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ atten-

tion.

P337 + P313 If eye irritation persists: Get medical advice/ at-

tention.

P391 Collect spillage.

Storage:



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

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

May form explosive dust-air mixture during processing, handling or other means.

#### Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Paraffin oil	8012-95-1	>= 50 -< 70
Xylene	1330-20-7	>= 10 -< 20
Flumethrin	69770-45-2	>= 2.5 -< 10

#### Section 4: First-aid measures

# Description of necessary 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 immediately. Wash clothing before reuse. Destroy contaminated shoes.

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.

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.

#### Most important symptoms and effects, both acute and delayed

Risks : Toxic if swallowed.

May be fatal if swallowed and enters airways.

Fatal in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May damage the unborn child.



# Flumethrin (2%) Formulation

Date of last issue: 30.09.2023 Version Revision Date: SDS Number: 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

May cause damage to organs if swallowed.

May cause damage to organs through prolonged or repeated

exposure.

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).

Indication of any immediate medical attention and special treatment needed

**Treatment** : Treat symptomatically and supportively.

## Section 5: Fire-fighting measures

## **Extinguishing media**

Suitable extinguishing media : Water spray

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical None known.

Unsuitable extinguishing

media

Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Hazardous combustion prod- : Carbon oxides

Exposure to combustion products may be a hazard to health.

### Special protective actions for fire-fighters

Special protective equipment:

for firefighters

Specific extinguishing meth-

ods

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

Use personal protective equipment.

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

Evacuate area.

#### Section 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas.

Only trained personnel should re-enter the area.

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

tective equipment recommendations (see section 8).

**Environmental precautions** 

Avoid release to the environment. Environmental precautions

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.



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

#### Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces

with compressed air).

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.

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

#### Precautions for safe handling

Technical measures : Static electricity may accumulate and ignite suspended dust

causing an explosion.

Provide adequate precautions, such as electrical grounding

and bonding, or inert atmospheres.

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

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition.

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. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

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, including any incompatibilities

Conditions for safe storage : Keep in properly labelled containers.

Store locked up. Keep tightly closed.

Store in accordance with the particular national regulations.

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

**Explosives** 

# Section 8: Exposure controls/personal protection

# **Control parameters**

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis		
Paraffin oil	8012-95-1	PEL (long term) (Mist)	5 mg/m3	SG OEL		
		PEL (short term) (Mist)	10 mg/m3	SG OEL		
		TWA (Inhal- able particu- late matter)	5 mg/m3	ACGIH		
Xylene	1330-20-7	PEL (long term)	100 ppm 434 mg/m3	SG OEL		
		PEL (short term)	150 ppm 651 mg/m3	SG OEL		
		TWA	20 ppm	ACGIH		
Flumethrin	69770-45-2	TWA	45 μg/m3 (OEB 3)	Internal		
	Further information: Skin					
		Wipe limit 450 μg/100 cm <sup>2</sup> Inte				

# **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentration	Basis
Xylene	1330-20-7	methylhip- puric acid	Urine		1.5 g/g cre- atinine	SG BTLV
		Methylhip- puric acids	Urine	End of shift (As soon as possible after exposure	1.5 g/g creatinine	ACGIH BEI



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

ceases)

Appropriate engineering control 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 con-

tainment devices).
Minimize open handling.

Individual protection measures, such as personal protective equipment (PPE)

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.

Skin 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.

Filter type Hand protection

: Combined particulates and organic vapour type

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Section 9: Physical and chemical properties

Appearance : liquid

Colour : light brown

Odour : odourized

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : May form explosive dust-air mixture during processing, han-

dling or other means.

Flammability (liquids) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.750 - 0.950 g/cm<sup>3</sup>

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Molecular weight : No data available

Particle characteristics

Particle size : Not applicable

# Section 10: Stability and reactivity

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

Possibility of hazardous reac- : May form explosive dust-air mixture during processing, han-



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

tions dling or other means.

Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Avoid dust formation. Oxidizing agents

Incompatible materials

Hazardous decomposition

products

No hazardous decomposition products are known.

## **Section 11: Toxicological information**

Information on likely routes of:

exposure

Inhalation Skin contact Ingestion Eye contact

**Acute toxicity** 

Toxic if swallowed. Fatal in contact with skin.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 187.52 mg/kg

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 187.5 mg/kg

Method: Calculation method

## **Components:**

Paraffin oil:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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

Assessment: The substance or mixture has no acute dermal

toxicity

Xylene:

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

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

Flumethrin:

Acute oral toxicity : LD50 (Rat): > 20 mg/kg

LD50 (Mouse): > 20 mg/kg



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Acute inhalation toxicity : LC50 (Rat): > 2,934 mg/l

Acute dermal toxicity : LD50 (Rat): > 5 mg/kg

Skin corrosion/irritation

Causes skin irritation.

**Components:** 

Paraffin oil:

Species : Rabbit

Result : No skin irritation

Xylene:

Species : Rabbit Result : Skin irritation

Flumethrin:

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

**Components:** 

Paraffin oil:

Species : Rabbit

Result : No eye irritation

Xylene:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Flumethrin:

Result : Mild eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

**Components:** 

Xylene:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Species : Mouse 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)

Species: Mouse

Application Route: Skin contact

Result: negative

Flumethrin:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)

Test system: Salmonella typhimurium

Result: equivocal

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

Result: positive

Remarks: Not classified due to inconclusive data.

Test Type: Chromosomal aberration Test system: Human lymphocytes

Result: negative

Test Type: in vitro micronucleus test

Test system: Mouse Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

#### Carcinogenicity

Not classified based on available information.



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

#### Components:

Xylene:

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

Flumethrin:

Species : Rat
Application Route : Oral
Exposure time : 2 Years

NOAEL : 0.5 mg/kg body weight

Result : negative

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Reproductive toxicity

May damage 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

Flumethrin:

Effects on foetal develop-

ment

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 0.36 mg/kg body weight Result: Maternal toxicity observed., Reduced offspring weight

gain, foetal abnormalities

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 0.5 mg/kg body weight Result: Maternal toxicity observed., Skeletal malformations,

Reduced foetal weight

Test Type: Development

Species: Rabbit



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Application Route: Oral

Developmental Toxicity: NOAEL: 1.7 mg/kg body weight

Result: No teratogenic potential

Reproductive toxicity - As-

sessment

May damage the unborn child.

# STOT - single exposure

May cause damage to organs if swallowed.

#### **Components:**

Xylene:

Assessment : May cause respiratory irritation.

Flumethrin:

Exposure routes : Oral

Assessment : Causes damage to organs.

# STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure if swallowed. May cause damage to organs (Auditory system) 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.

Flumethrin:

Exposure routes : Oral

Assessment : Causes damage to organs through prolonged or repeated

exposure.

# Repeated dose toxicity

#### **Components:**

#### Paraffin oil:

Species: Rat, femaleLOAEL: 161 mg/kgApplication Route: IngestionExposure time: 90 Days

Xylene:

Species : Rat

LOAEL : > 0.2 - 1 mg/l
Application Route : inhalation (vapour)



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Exposure time : 13 Weeks

Remarks : Based on data from similar materials

Species : Rat

LOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Flumethrin:

Species : Rat

NOAEL : 0.7 mg/kg

Application Route : Oral

Exposure time : 13 Weeks

Target Organs : digestive system, Skin

Symptoms : decrease in appetite, Skin disorders

Species : Dog
NOAEL : 0.88 mg/kg
Application Route : Oral
Exposure time : 13 Weeks

Target Organs : digestive system, Hair, Skin

Symptoms : decrease in appetite, Skin disorders

#### **Aspiration toxicity**

May be fatal if swallowed and enters airways.

#### **Components:**

#### Paraffin oil:

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.

#### 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.

#### **Section 12: Ecological information**

#### **Toxicity**

#### **Components:**

#### Paraffin oil:

Toxicity to fish : LL50 (Scophthalmus maximus (turbot)): > 100 mg/l

Exposure time: 96 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

Toxicity to daphnia and other : EL50 (Acartia tonsa (Calanoid copepod)): > 100 mg/l



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

aquatic invertebrates Exposure time: 48 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EL50 (Skeletonema costatum (marine diatom)): > 100 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

NOELR (Skeletonema costatum (marine diatom)): > 1 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials

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 : aquatic invertebrates (Chron-

ic toxicity)

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

Exposure time: 21 d

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

Flumethrin:

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): 0.046 mg/l

Exposure time: 144 h

M-Factor (Chronic aquatic

toxicity)

: 1



# Flumethrin (2%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 06.04.2024
 10225132-00007
 Date of first issue: 12.11.2021

#### 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

Bioaccumulative potential

**Components:** 

Paraffin oil:

Partition coefficient: n- : log Pow: > 4

octanol/water Remarks: Calculation

Xylene:

Partition coefficient: n- : log Pow: 3.16

octanol/water Remarks: Calculation

Flumethrin:

Partition coefficient: n- : log Pow: 6.2

octanol/water

**Mobility in soil**No data available

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.

If not otherwise specified: Dispose of as unused product.

**Section 14: Transport information** 

International Regulations

UNRTDG

UN number : UN 2810

UN proper shipping name : TOXIC LIQUID, ORGANIC, N.O.S.

(Flumethrin)



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

Transport hazard class(es) : 6.1
Packing group : II
Labels : 6.1
Environmental hazards : no

**IATA-DGR** 

UN/ID No. : UN 2810

UN proper shipping name : Toxic liquid, organic, n.o.s.

(Flumethrin)

Transport hazard class(es) : 6.1
Packing group : II
Labels : Toxic
Packing instruction (cargo : 662

aircraft)

Packing instruction (passen: 654

ger aircraft)

**IMDG-Code** 

UN number : UN 2810

Proper shipping name : TOXIC LIQUID, ORGANIC, N.O.S.

(Flumethrin)

Transport hazard class(es) : 6.1
Packing group : II
Labels : 6.1
EmS Code : F-A, S-A
Marine pollutant : yes

# Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### 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 specific for the product in question

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Not applicable

Environmental Protection and Management Act and

Environmental Protection and Management (Hazard-

ous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable

Regulations

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

AICS : not determined



# Flumethrin (2%) Formulation

Date of last issue: 30.09.2023 Version Revision Date: SDS Number: 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

DSL not determined

**IECSC** not determined

#### Section 16: Other information

**Revision Date** 06.04.2024

**Further information** 

Sources of key data used to compile the Safety Data

Sheet

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

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

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

Date format dd.mm.yyyy

Full text of other abbreviations

USA. ACGIH Threshold Limit Values (TLV) **ACGIH** ACGIH - Biological Exposure Indices (BEI) **ACGIH BEI** SG BTLV Singapore. Biological Threshold Limit Values

Singapore. Workplace Safety and Health (General Provisions) SG OEL

Regulations - First Schedule Permissible Exposure Limits of

Toxic Substances.

ACGIH / TWA 8-hour, time-weighted average

Permissible Exposure Level (PEL) Long Term SG OEL / PEL (long term) SG OEL / PEL (short term) Permissible Exposure Level (PEL) Short Term

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 Substanc-



# Flumethrin (2%) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 06.04.2024 10225132-00007 Date of first issue: 12.11.2021

es; (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.

SG / EN