Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

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

1.1	Product identifier Trade name	:	Flumethrin (1%) Formulation
1.2	Relevant identified uses of th Use of the Sub-		ubstance or mixture and uses advised against Veterinary product
	stance/Mixture		
	Recommended restrictions on use	:	Not applicable
1.3	Details of the supplier of the	saf	ety data sheet
	Company	:	MSD Balıkhisar Mah. Köyiçi Küme Evleri No: 765/A Çubuk Yolu 2. Km Akyurt / Ankara / TÜRKİYE
	Telephone	:	+90 312 840 53 00
	E-mail address of person responsible for the SDS	:	EHSDATASTEWARD@msd.com

#### 1.4 Emergency telephone number

National Poison Control Center (UZEM): 114 Emergency: 1-908-423-6000

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification T.R. SEA No 28848 and subsequent amendments

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Reproductive toxicity, Category 1B	H360D: May damage the unborn child.
Specific target organ toxicity - single ex-	H371: May cause damage to organs.
posure, Category 2	
Specific target organ toxicity - repeated	H373: May cause damage to organs through pro-
exposure, Category 2	longed or repeated exposure.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters air-
	ways.
Long-term (chronic) aquatic hazard, Cat-	H412: Harmful to aquatic life with long lasting ef-
egory 3	fects.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023	
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020	
2.2 Label elements				

### 2.2 Label elements

Labelling T.R. SEA No 28848 and subsequent amendments			
Hazard pictograms :			
Signal word :	Danger		
Hazard statements :	<ul> <li>H226 Flammable liquid and vapour.</li> <li>H302 Harmful if swallowed.</li> <li>H304 May be fatal if swallowed and enters airways.</li> <li>H311 Toxic in contact with skin.</li> <li>H315 Causes skin irritation.</li> <li>H319 Causes serious eye irritation.</li> <li>H360D May damage the unborn child.</li> <li>H371 May cause damage to organs.</li> <li>H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>H412 Harmful to aquatic life with long lasting effects.</li> </ul>		
Precautionary statements :	<ul> <li>Prevention:</li> <li>P201 Obtain special instructions before use.</li> <li>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P273 Avoid release to the environment.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> </ul>		
	Response: P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.		
Hazardous components which Paraffin oil	must be listed on the label:		
Xylene			

Flumethrin

#### 2.3 Other hazards

Vapours may form explosive mixture with air.

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

#### Components

Chemical name	CAS-No.	SEA Classification	Concentration
	EC-No.		(% w/w)

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

ersion 0	Revision Date: 06.04.2024		e of last issue: 30.09.2023 e of first issue: 06.11.2020	-
		Index-No. KKDIK Registra tion No.	-	
Paraf	fin oil	8012-95-1 232-384-2	Asp. Tox. 1; H304 Aquatic Chronic 4; H413	>= 50 - < 70
Xylen		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	>= 10 - < 20
Flume	ethrin	69770-45-2 274-110-4	Acute Tox. 2; H300 Acute Tox. 1; H310 Eye Irrit. 2; H319 Repr. 1B; H360D STOT SE 1; H370 STOT RE 1; H372 Aquatic Chronic 1; H410 	>= 1 - < 2,5
Tolue	ne	108-88-3 203-625-9 601-021-00-3	aquatic toxicity): 1 Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361d STOT SE 3; H336 STOT RE 2; H373 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 0,25 - < 1

For explanation of abbreviations see section 16.

:

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice

In the case of accident or if you feel unwell, seek medical advice immediately.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024		DS Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020		
			When symptoms advice.	persist or in all cases of doubt seek medical		
Protection of first-aiders		:	and use the reco	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).		
lf inha	aled	:	If inhaled, removed Get medical atter			
In case of skin contact		:	for at least 15 mi and shoes. Get medical atter Wash clothing be	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 wat for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.			
If swallowed		:	If vomiting occurs Call a physician of Rinse mouth tho	NOT induce vomiting. s have person lean forward. or poison control centre immediately. roughly with water. ing by mouth to an unconscious person.		
4.2 Most i	important symptoms a	and	effects, both acut	e and delaved		
Risks		:	Harmful if swallor May be fatal if sw Toxic in contact v Causes skin irrita Causes serious e May damage the May cause dama	wed. vallowed and enters airways. with skin. ation. eye irritation. unborn child.		
4.3 Indica	tion of any immediate	e me	dical attention an	d special treatment needed		
Treat	ment	:	Treat symptomat	ically and supportively.		
SECTION	N 5: Firefighting mea	asur	es			

5.1 Extinguishing media		
Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing	:	High volume water jet

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

media

#### 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
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	<ul> <li>Remove all sources of ignition.</li> <li>Use personal protective equipment.</li> <li>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).</li> </ul>
----------------------	---

### 6.2 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.

#### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up	<ul> <li>Non-sparking tools should be used.</li> <li>Soak up with inert absorbent material.</li> <li>Suppress (knock down) gases/vapours/mists with a water spray jet.</li> </ul>
	For large spills, provide dyking or other appropriate contain- ment 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-

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020
		posal of this ma employed in the mine which reg Sections 13 an	al regulations may apply to releases and dis- aterial, as well as those materials and items e cleanup of releases. You will need to deter- ulations are applicable. d 15 of this SDS provide information regarding national requirements.

#### 6.4 Reference to other sections

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

#### 7.1 Precautions for safe handling

	5	
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.
5		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.
		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. Wash contami- nated 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.
2 Conditions for safe storage	inc	luding any incompatibilities

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage	:	Keep in properly labelled containers. Store locked up. Keep
areas and containers		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.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024	SDS Number: 7358521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
Advic	e on common storage	Strong oxidizin Self-reactive s Organic peroxi Flammable so Pyrophoric liqu Pyrophoric sol Self-heating su Substances ar flammable gas Explosives Gases	ubstances and mixtures ides iids iids ibstances and mixtures ind mixtures, which in contact with water, emit
	f <b>ic end use(s)</b> ific use(s)	: No data availa	ble

### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form	Control parameters	Basis		
Componente	0/10/10.	of exposure)	Control parametero	Baolo		
Paraffin oil	8012-95-1	TWA (8 Hour)	5 mg/m3	TR OEL		
Xylene	1330-20-7	TWA (8 Hour)	50 ppm	TR OEL		
			221 mg/m3			
	Further inforn	nation: A skin notatio	n assigned to the OEL identi	fies the possi-		
		cant uptake through				
		STEL 15 min	100 ppm	TR OEL		
			442 mg/m3			
	Further inform	nation: A skin notatio	n assigned to the OEL identi	fies the possi-		
	bility of signifi	cant uptake through	the skin.			
		TWA	50 ppm	2000/39/EC		
			221 mg/m3			
		Further information: Identifies the possibility of significant uptake through the				
	skin, Indicativ					
		STEL	100 ppm	2000/39/EC		
			442 mg/m3			
		Further information: Identifies the possibility of significant uptake through the skin, Indicative				
Flumethrin	69770-45-2	TWA	45 µg/m3 (OEB 3)	Internal		
	Further inform	nation: Skin	· · · · · ·			
		Wipe limit	450 μg/100 cm <sup>2</sup>	Internal		
Toluene	108-88-3	TWA (8 Hour)	50 ppm	TR OEL		
			192 mg/m3			
		Further information: A skin notation assigned to the OEL identifies the possi-				
	bility of signifi	bility of significant uptake through the skin.				
		STEL 15 min	100 ppm	TR OEL		
			384 mg/m3			

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024	SDS Number: 7358521-00010	Date of last issue: 30.09 Date of first issue: 06.11	
		ner information: A skin of significant uptake th	notation assigned to the OE prough the skin.	L identifies the possi-
		TWÁ	50 ppm 192 mg/m3	2006/15/EC
		ner information: Indicat	ive, Identifies the possibility	of significant uptake
		STEL	100 ppm 384 mg/m3	2006/15/EC
		er information: Indicat	ive, Identifies the possibility	of significant uptake

#### Derived No Effect Level (DNEL) :

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
Xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3
	Workers	Inhalation	Acute systemic ef- fects	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 ef- fects	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
Glycerides, mixed decanoyl and oc- tanoyl	Workers	Inhalation	Long-term systemic effects	177,79 mg/m3
	Workers	Skin contact	Long-term systemic effects	25,21 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	43,84 mg/m3
	Consumers	Skin contact	Long-term systemic effects	12,61 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12,61 mg/kg bw/day
Paraffin oil	Workers	Inhalation	Long-term systemic effects	5 mg/m3
	Workers	Inhalation	Short-term exposure	5 mg/m3
	Workers	Inhalation	Long-term local ef- fects	5 mg/m3
	Workers	Inhalation	Acute local effects	5 mg/m3

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024	SDS Nur 7358521		Date of last issue: 30.09.2023 Date of first issue: 06.11.2020	
Tolue	ne	Workers	Inhalation	Acute systemic ef- fects	384 mg/m3
		Workers	Inhalation	Acute local effects	384 mg/m3
		Workers	Skin conta	ct Long-term systemic effects	384 mg/kg bw/day
		Workers	Inhalation	Long-term systemic effects	192 mg/m3
		Workers	Inhalation	Long-term local ef- fects	192 mg/m3
		Consumers	Inhalation	Acute systemic ef- fects	226 mg/m3
		Consumers	Inhalation	Acute local effects	226 mg/m3
		Consumers	Skin conta	ct Long-term systemic effects	226 mg/kg bw/day
		Consumers	Inhalation	Long-term systemic effects	56,5 mg/m3
		Consumers	Ingestion	Long-term systemic effects	8,13 mg/kg bw/day
		Consumers	Inhalation	Long-term local ef- fects	56,5 mg/m3

#### Predicted No Effect Concentration (PNEC) :

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.)
Glycerides, mixed decanoyl and octanoyl	Oral (Secondary Poisoning)	0,03 mg/kg food
Toluene	Fresh water	0,68 mg/l
	Marine water	0,68 mg/l
	Intermittent use/release	0,68 mg/l
	Sewage treatment plant	13,61 mg/l
	Fresh water sediment	16,39 mg/kg dry
		weight (d.w.)
	Marine sediment	16,39 mg/kg dry
		weight (d.w.)
	Soil	2,89 mg/kg dry
		weight (d.w.)

#### 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.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

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.
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, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.
Respiratory protection	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Equipment should conform to TS 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

Appearance Colour Odour Odour Threshold	::	Aqueous solution light brown, yellow No data available No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling	:	No data available
range Flash point	:	54 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Versi 4.0	ion	Revision Date: 06.04.2024		S Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020		
Lower explosion limit / Lower flammability limit		:	No data available	9			
Vapour pressure		:	No data available				
I	Relative	e vapour density	:	No data available	9		
I	Relative	e density	:	No data available	9		
I	Density	,	:	0,820 - 0,900 g/c	m <sup>3</sup>		
	Partition octanol, Auto-ig	er solubility n coefficient: n-	: :	No data available Not applicable No data available No data available	2		
I	Explosi	ty osity, kinematic ve properties ng properties	:	No data available Not explosive The substance o	e r mixture is not classified as oxidizing.		
		formation ability (liquids)	:	No data available	9		
I	Molecu	lar weight	:	No data available	9		
I	Particle	size	:	Not applicable			

#### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions		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.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024		9S Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020	
10.5 Incon	npatible materials				
Mater	ials to avoid	:	Oxidizing agents		
	rdous decomposition p				
	I 11: Toxicological in				
11 1 Infor	mation on toxicologica	l off	iaata		
	nation on likely routes of		Inhalation Skin contact Ingestion Eye contact		
Harm	e toxicity ful if swallowed. in contact with skin.				
Produ	uct:				
Acute	oral toxicity	:	Acute toxicity estine Method: Calculation	mate: 410,05 mg/kg on method	
Acute	inhalation toxicity	:	<ul> <li>Acute toxicity estimate: &gt; 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method</li> </ul>		
Acute	dermal toxicity	:	Acute toxicity estin Method: Calculation	mate: 393,03 mg/kg on method	
<u>Comp</u>	oonents:				
Paraf	fin oil:				
Acute	oral toxicity	:	LD50 (Rat): > 5.00	00 mg/kg	
Acute	dermal toxicity	:	LD50 (Rabbit): > 2.000 mg/kg Assessment: The substance or mixture has no acute dern toxicity		
Xylen	ie:				
Acute	oral toxicity	:	: LD50 (Rat): 3.523 mg/kg Method: Directive 67/548/EEC, Annex V, B.1.		
Acute	inhalation toxicity	:	<ul> <li>Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Expert judgement Remarks: Based on national or regional regulation.</li> </ul>		
Acute	dermal toxicity	:	Acute toxicity estin	mate: 1.100 mg/kg	

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024	SDS Number: 7358521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
		Method: Expe Remarks: Bas	rt judgement eed on national or regional regulation.
Flum	ethrin:		
Acute	e oral toxicity	: LD50 (Rat): >	20 mg/kg
		LD50 (Mouse)	): > 20 mg/kg
Acute	e inhalation toxicity	: LC50 (Rat): >	2.934 mg/l
Acute	e dermal toxicity	: LD50 (Rat): >	5 mg/kg
Tolue	ene:		
Acute	e oral toxicity	: LD50 (Rat): >	5.000 mg/kg
Acute	e inhalation toxicity	: LC50 (Rat): 2 Exposure time Test atmosph	e: 4 h
Acute	e dermal toxicity	: LD50 (Rabbit)	: > 5.000 mg/kg
		: Rabbit : No skin irritati	on
Xyleı	ne:		
Spec Resu	ies It	: Rabbit : Skin irritation	
Flum	ethrin:		
Resu	llt	: No skin irritati	on
Tolue	ene:		
Spec		: Rabbit	
Meth Resu		: Directive 67/5 : Skin irritation	48/EEC, Annex V, B.4.
	ous eye damage/eye i		
	es serious eye irritatior	).	
	ponents:		
Spec	<b>ffin oil:</b> ies	: Rabbit	
			-

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024		DS Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020	
Result		:	No eye irritation		
Xylene Specie Result		:	Rabbit Irritation to eyes,	reversing within 21 days	
Flumethrin: Result		:	Mild eye irritation		
<b>Toluene:</b> Species Method Result		:	Rabbit OECD Test Guideline 405 No eye irritation		
Respiratory or skin sensitisat			on		

#### 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
Species	:	Mouse
Test Type Exposure routes Species Result	:	negative

#### Toluene:

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: Directive 67/548/EEC, Annex V, B.6.
Test Type Exposure routes Species Method 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

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024	SDS Numb 7358521-0		Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
		Result:	negative	
		malian		sister chromatid exchange assay in mam-
Genotoxicity in vivo : Test Type: Rodent dominant let Species: Mouse Application Route: Skin contact Result: negative		t dominant lethal test (germ cell) (in vivo) : Skin contact		
Flu	umethrin:			
Ge	notoxicity in vitro	Test sy		ial mutagenesis assay (Ames test) nonella typhimurium
		Test sy Result:	stem: Chin positive	osomal aberration ese hamster ovary cells ssified due to inconclusive data.
		Test sy		osomal aberration an lymphocytes
		Test sy	pe: in vitro stem: Mou negative	micronucleus test se
	erm cell mutagenicity- As- ssment	: Weight cell mut		e does not support classification as a germ
То	luene:			
Ge	notoxicity in vitro		pe: In vitro negative	mammalian cell gene mutation test
			pe: Bacter negative	ial reverse mutation assay (AMES)
Ge	notoxicity in vivo	cytoger Species Applica	netic test, c s: Rat	enicity (in vivo mammalian bone-marrow hromosomal analysis) : Intraperitoneal injection
		Species Applica Method	s: Mouse tion Route	t dominant lethal test (germ cell) (in vivo) : inhalation (vapour) est Guideline 478

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024		lumber: 21-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
	ogenicity			
Not cla	ssified based on ava	ilable info	rmation.	
Compo	onents:			
Xylene	:			
Specie		: Ra		
Applica	ition Route ire time		gestion	
Exposu Result	Ire time	-	3 weeks gative	
result		. 10	ganve	
Flumet	hrin:			
Specie	S	: Ra	t	
Applica	ition Route are time	: Or		
Exposu	ire time		lears	(weight
NOAEL Result	-		5 mg/kg body gative	veight
		. 110	ganvo	
	ogenicity - Assess-		-	ence does not support classification as a car-
ment		cin	logen	
II Toluen				
Specie		: Ra	.+	
	s Ition Route		alation (vap	our)
Exposu	ire time		3 weeks	
Result		: ne	gative	
Specie	S	: Mc	ouse	
	tion Route		in contact	
	ire time		Months	
Result		: ne	gative	
Domro	luctive tovicity			
•	ductive toxicity mage the unborn ch	ild		
-	-			
	onents:			
Xylene				
Effects	on fertility		st Type: One ecies: Rat	e-generation reproduction toxicity study
				ute: inhalation (vapour)
			sult: negativ	
Effecte	on footal davalar	. т.	ot Tunos Em	hrve feetal development
Effects	on foetal develop-		st Type: Em ecies: Rat	bryo-foetal development
ment				ute: inhalation (vapour)
			sult: negativ	
11				
Flumet				
	on foetal develop-		st Type: Dev	relopment
ment		Sp	ecies: Rat	

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024		DS Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020				
	Application Route: Oral Developmental Toxicity: NOAEL: 0,36 mg/kg body weight Result: Maternal toxicity observed., Reduced offspring weig gain, foetal abnormalities							
		Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 0,5 mg/kg body weigh Result: Maternal toxicity observed., Skeletal malformati Reduced foetal weight						
			Test Type: Develor Species: Rabbit Application Route Developmental To Result: No terato	e: Oral oxicity: NOAEL: 1,7 mg/kg body weight				
Repr sessi	oductive toxicity - As- ment	:	May damage the	unborn child.				
Tolu	ene:							
Effec	ts on fertility	:	Species: Rat Application Route	eneration reproduction toxicity study :: inhalation (vapour) est Guideline 416				
Effec ment	ts on foetal develop-	:	Species: Rat	vo-foetal development e: inhalation (vapour)				
Repr sessi	oductive toxicity - As- ment	:	Some evidence o animal experimer	f adverse effects on development, based on nts.				
	<b>T - single exposure</b> cause damage to organs	6.						
Com	ponents:							
Xylei	-							
-	ssment	:	May cause respire	atory irritation.				
Flum	ethrin:							
	sure routes ssment	:	Oral Causes damage t	to organs.				
Tolu								
Asse	ssment	:	May cause drows	iness or dizziness.				

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



Version 4.0	Revision Date: 06.04.2024	SDS Number: 7358521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
STO	<b>F</b> - repeated exposure	9	
May	cause damage to orga	ns through prolonged	or repeated exposure.
<u>Com</u>	ponents:		
Xyler			
Expo Targe Asse	sure routes et Organs ssment		
Flum	ethrin:		
	sure routes ssment	: Oral : Causes dama exposure.	ge to organs through prolonged or repeated
Tolue	ene:		
Expo Targe Asse	sure routes et Organs ssment	<ul> <li>Inhalation</li> <li>Central nervoit</li> <li>May cause date</li> <li>exposure.</li> </ul>	us system mage to organs through prolonged or repeated
-	eated dose toxicity ponents:		
	ffin oil:		
Spec LOAE		: Rat, female : 161 mg/kg	
Appli	cation Route sure time	: Ingestion : 90 Days	
Xyler	ne:		
Spec	ies	: Rat	
LOAE Appli	L cation Route	: > 0,2 - 1 mg/l : inhalation (va	
Expo	sure time	: 13 Weeks	
Rema	arks	: Based on data	a from similar materials
Spec		: Rat	
LOAE Appli	=∟ cation Route	: 150 mg/kg : Ingestion	
Expo	sure time	: 90 Days	
Flum	ethrin:		
Spec		: Rat	
NOA Appli		: 0,7 mg/kg : Oral	
Expo	cation Route sure time	: 13 Weeks	
large	et Organs	: digestive system	em, Skin

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024		S Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020		
Symp	otoms	:	: decrease in appetite, Skin disorders			
Species NOAEL Application Route Exposure time Target Organs Symptoms		:	<ul> <li>Dog</li> <li>0,88 mg/kg</li> <li>Oral</li> <li>13 Weeks</li> <li>digestive system, Hair, Skin</li> <li>decrease in appetite, Skin disorders</li> </ul>			
Tolue						
Species LOAEL Application Route Exposure time			Rat 1,875 mg/l inhalation (vapou 6 Months	ur)		
Species : NOAEL : Application Route : Exposure time :		:	Rat 625 mg/kg Ingestion 13 Weeks			

#### 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.

#### Toluene:

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:

Toluene:

Inhalation

: Target Organs: Central nervous system Symptoms: Neurological disorders

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Com	ponents:

<b>Paraffin oil:</b> 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 aquatic invertebrates	:	EL50 (Acartia tonsa (Calanoid copepod)): > 100 mg/l 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 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-	:	EL10: > 1 - 10 mg/l Exposure time: 21 d

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Versic 4.0	on	Revision Date: 06.04.2024		0S Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020		
ic	ic toxicity)			Method: OECD Te	magna (Water flea) est Guideline 211 on data from similar materials		
F	lumet	hrin:					
	oxicity city)	to fish (Chronic tox-	:	NOEC: 0,046 mg/ Exposure time: 14 Species: Danio re	4 h		
	И-Facto oxicity)	or (Chronic aquatic	:	1			
т	oluen	e:					
Т	oxicity	to fish	:	LC50 (Oncorhync Exposure time: 96	hus kisutch (coho salmon)): 5,5 mg/l bh		
		to daphnia and other invertebrates	:	EC50 (Ceriodaphi Exposure time: 48	nia dubia (water flea)): 3,78 mg/l 8 h		
	oxicity	to algae/aquatic	:	NOEC (Skeletone Exposure time: 72	ma costatum (marine diatom)): 10 mg/l ? h		
Т	oxicity	to microorganisms	:	EC50 (Nitrosomor Exposure time: 24			
	Toxicity city)	to fish (Chronic tox-	:	NOEC: 1,39 mg/l Exposure time: 40 Species: Oncorhy	) d nchus kisutch (coho salmon)		
a		to daphnia and other invertebrates (Chron- ty)	:	Exposure time: 7	d ohnia dubia (water flea)		
12.2 F	12.2 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
Toluene:		
Biodegradability	:	Result: Readily biodegradable. Biodegradation: 80 % Exposure time: 20 d

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024		DS Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
12.3 Bioa	ccumulative potentia	al		
Com	ponents:			
Paraf	ifin oil:			
	ion coefficient: n- ol/water	:	log Pow: > 4 Remarks: Calcu	ulation
Xyler	ne:			
	ion coefficient: n- ol/water	:	log Pow: 3,16 Remarks: Calcu	ulation
Flum	ethrin:			
	ion coefficient: n- ol/water	:	log Pow: 6,2	
Tolue	ene:			
Bioac	cumulation	:		scus idus (Golden orfe) n factor (BCF): 90
	ion coefficient: n- ol/water	:	log Pow: 2,73	
	<b>lity in soil</b> ata available			
12.5 Resu	Its of PBT and vPvE	3 asse	ssment	
Not re	elevant			
12.6 Othe	r adverse effects			
No da	ata 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.

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

#### **SECTION 14: Transport information**

14.1 UN number			
ADN	:	UN 1992	
ADR	:	UN 1992	
RID	:	UN 1992	
IMDG	:	UN 1992	
ΙΑΤΑ	:	UN 1992	
14.2 UN proper shipping name			
adn II	:	FLAMMABLE LIQUID (Xylene, Flumethrin)	), TOXIC, N.O.S.
ADR 	:	FLAMMABLE LIQUID (Xylene, Flumethrin)	), TOXIC, N.O.S.
RID 	:	FLAMMABLE LIQUID (Xylene, Flumethrin)	), TOXIC, N.O.S.
IMDG II	:	FLAMMABLE LIQUID (Xylene, Flumethrin)	), TOXIC, N.O.S.
iata II	:	Flammable liquid, toxic, n.o.s. (Xylene, Flumethrin)	
14.3 Transport hazard class(es)			
		Class	Subsidiary risks
ADN	:	3	6.1
ADR	:	3	6.1
RID	:	3	6.1
IMDG	:	3	6.1
ΙΑΤΑ	:	3	6.1
14.4 Packing group			
<b>ADN</b> Packing group Classification Code Hazard Identification Number Labels	:	III FT1 36 3 (6.1)	
ADR Packing group Classification Code Hazard Identification Number Labels Tunnel restriction code RID Packing group	:	III FT1 36 3 (6.1) (D/E) III	

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Vers 4.0	ion	Revision Date: 06.04.2024		0S Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
		cation Code Identification Number	:	FT1 36 3 (6.1)	
	IMDG Packing Labels EmS C		:	III 3 (6.1) F-E, S-D	
	aircraft	g instruction (cargo ) g instruction (LQ)	:	366 Y343 III Flammable Liquid	ds. Toxic
	IATA (F Packing ger airc	g instruction (LQ)	:	355 Y343 III Flammable Liquid	
14.5	Enviro	nmental hazards			
	ADN Enviror ADR	mentally hazardous	:	no	
		mentally hazardous	:	no	
	<b>RID</b> Enviror	mentally hazardous	:	no	
	<b>IMDG</b> Marine	pollutant	:	no	
14.6	Specia	I precautions for use	r		
	The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the uppackaged material as it is described within this Safety Data				

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

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

Remarks

: Not applicable for product as supplied.

#### **SECTION 15: Regulatory information**

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

Substance(s) or mixture(s) are listed here according to their appearance

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024	SDS Number: 7358521-00010		f last issue: 30.09.20 f first issue: 06.11.2	
				use/purpose or the restriction. Please tions in correspon determine whethe	rrespective of their e conditions of the refer to the condi- ding Regulation to an entry is appli- ng on the market or
				Toluene (Number	on list 48)
30595	and subsequent amer	anic Pollutants (Numb ndments published) major industrial accider			
P5c		FLAMMABLE LIC	0	Quantity 1 5.000 t	Quantity 2 50.000 t

#### Other regulations:

T.R. Regulation on Classification, Labeling and Packaging of Substances and Mixtures, dated December 11, 2013 and numbered 28848 from the Ministry of Environment and Urbanization and the subsequent amendments published.

Regulation on health and safety measures regarding working with chemicals (Number: 28733, 2013). Occupational Exposure Limit Values (Annex 1)

Regulation on Import and Export of Certain Hazardous Chemicals, No. 32087, 2023	:	Not applicable
Chemicals, No. 32087, 2023		

#### 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. The SDS has been prepared by: Name: Gökhan Ardıç; Con- tact email: sds@chemleg.com; Telephone number: +90 216 706 1307; Certificate Number: Lonca KDU 34 / 2020.08; Cer- tificate Date: 22 September 2020; Valid Until: 22 September 2025
Full text of H-Statements		
H225	:	Highly flammable liquid and vapour.

Highly flammable liquid and vapour. 2

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



# Flumethrin (1%) Formulation

Version 4.0	Revision Date: 06.04.2024		DS Number: 58521-00010	Date of last issue: 30.09.2023 Date of first issue: 06.11.2020
H226 H300 H304 H310 H312 H315 H319 H332 H335 H336 H360D H361d H370 H372 H373 H410	,		Flammable liquid Fatal if swallowed May be fatal if sw Fatal in contact w Harmful in contact Causes skin irrita Causes serious e Harmful if inhaled May cause respir May cause drows May damage the Suspected of dam Causes damage causes damage exposure if swalld May cause dama exposure. Very toxic to aqua	and vapour. d. allowed and enters airways. ith skin. it with skin. it with skin. tion. ye irritation. l. atory irritation. iness or dizziness. unborn child. haging the unborn child. to organs if swallowed. to organs through prolonged or repeated owed. ge to organs through prolonged or repeated atic life with long lasting effects.
H412 H413		:		c life with long lasting effects. asting harmful effects to aquatic life.

# The Turkish SDS has been prepared according to the Regulation on Safety Data Sheets for Hazardous Substances and Mixtures No. 29204.

#### Full text of other abbreviations

Acute Tox. Aquatic Chronic Asp. Tox. Eye Irrit. Flam. Liq. Repr.		Acute toxicity Long-term (chronic) aquatic hazard Aspiration hazard Eye irritation Flammable liquids Reproductive toxicity
Skin Irrit.	:	Skin irritation
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
2006/15/EC	:	Europe. Indicative occupational exposure limit values
TR OEL	:	Türkiye. Chemical Agents at Work - Annex I: Indicative occupational exposure limit values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2006/15/EC / TWA	:	Limit Value - eight hours
2006/15/EC / STEL	:	Short term exposure limit
TR OEL / TWA (8 Hour)	:	Measured or calculated in relation to a reference period of eight-hour time-weighted average
TR OEL / STEL 15 min	:	A limit value above which exposure should not occur and is related to a 15-minute period, unless otherwise specified

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 -

Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### Further information

Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Safety Data		eChem Portal search results and European Chemicals Agen-
Sheet		cy, http://echa.europa.eu/

Classification of the m	ixture:	Classification procedure:
Flam. Liq. 3	H226	Based on product data or assessment
Acute Tox. 4	H302	Calculation method
Acute Tox. 3	H311	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Repr. 1B	H360D	Calculation method
STOT SE 2	H371	Calculation method
STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Chronic 3	H412	Calculation method

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Prepared in accordance with the provisions of KKDIK Annex-2 Regulation, 23.06.2017, No: 30105



## Flumethrin (1%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
4.0	06.04.2024	7358521-00010	Date of first issue: 06.11.2020

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.

TR / EN