FLYING INSECT KILLER

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	09.02.2023	11172151-00001	Date of first issue: 09.02.2023

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

1.1 Product identifier

Trade name : FLYING INSECT KILLER

Product code : Article/SKU: 79203705 UVP: 05685493 Specification: 102000012978

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

Use of the Sub-stance/Mixture : Insecticide

1.3 Details of the supplier of the safety data sheet

Company : 2022 Environmental Science FR S.A.S.
For GB: Milton Hall, Ely Rd., Milton
Cambridge CB24 6WZ, United Kingdom
For NI:
Lyon Vaise Business Center, 3 Place Giovanni Da Verrazzano
69009 Lyon, France

Telephone : 00800 1214 9451

E-mail address of person responsible for the SDS : service.clients.es.france@envu.com

1.4 Emergency telephone number

For Emergency or Spill call:
+44 20 3807 3798 (24/7 multilingual support)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Cat-	H410: Very toxic to aquatic life with long lasting

egory 1 effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P260 Do not breathe spray.

Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aerosol dispenser (AE)

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics	Not Assigned 01-2119456377-30	Asp. Tox. 1; H304 EUH066	>= 1 - < 10
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	246538-78-3 01-2119456810-40	Asp. Tox. 1; H304 EUH066	>= 1 - < 10
1R-trans Phenothrin	26046-85-5 247-431-2	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 10	>= 0.25 - < 1
d-Tetramethrin	1166-46-7 214-619-0 607-728-00-3	Acute Tox. 4; H302 Carc. 2; H351 STOT SE 2; H371 (Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 Acute toxicity estimate Acute oral toxicity: 1,040 mg/kg	>= 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.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : sneezing
The product causes irritation of eyes, skin and mucous membranes.
Cough
Skin and eye paraesthesia which may be severe
Usually transient with resolution within 24 hours
hypotension
Nausea
Vomiting
Headache
Abdominal pain
Diarrhoea
Convulsions
Dizziness
Coma
Somnolence
Tremors
tachycardia
muscle twitching
Blurred vision
lethargy
discomfort in the chest

Pulmonary oedema
anorexia
Airway hyperreaction
Prostration
Palpitation
Inhalation may provoke the following symptoms:
Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).
Aspiration may cause pulmonary oedema and pneumonitis.
Symptoms and hazards refer to the solvent.

Risks : This product contains a pyrethroid.
Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.
In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours.
However, the application of activated charcoal and sodium sulphate is always advisable.
Oxygen or artificial respiration if needed.
Keep respiratory tract clear.
In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.
Monitor: respiratory and cardiac functions.
Contraindication: atropine.
Recovery is spontaneous and without sequelae.
Contraindication: derivatives of adrenaline.
If not effective, phenobarbital may be used.
In case of aspiration intubation and bronchial lavage should be considered.
Monitor: kidney, liver and pancreas function.
In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : 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 methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid breathing spray. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Do not spray on an open flame or other ignition source.
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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.
Advice on common storage	:	Do not store with the following product types: Self-reactive substances and mixtures Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which in contact with water, emit flammable gases Explosives

Gases

7.3 Specific end use(s)

Specific use(s) : Refer to the label and/or leaflet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Butane	106-97-8	TWA	600 ppm 1,450 mg/m3	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage.			
		STEL	750 ppm 1,810 mg/m3	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage.			

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety glasses
Equipment should conform to EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0.4 mm
Directive : Equipment should conform to EN 374

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of

cuts, abrasion, and the contact time.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Equipment should conform to EN 14387

Filter type : Organic vapour type (A)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	aerosol
Propellant	:	Butane, propane, Isobutane
Colour	:	No data available
Odour	:	No data available
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	8.40 %(V)
Lower explosion limit / Lower flammability limit	:	1.80 %(V)
Flash point	:	< -60.00 °C
Auto-ignition temperature	:	288.0 °C
Decomposition temperature	:	No data available
pH	:	No data available

Viscosity		
Viscosity, kinematic	:	Not applicable
Solubility(ies)		
Water solubility	:	slightly soluble
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	Not applicable
Density	:	0.81 g/cm³ (20.00 °C)
Relative vapour density	:	2.90
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	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	:	Extremely flammable aerosol. Vapours may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Bases Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4.951 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4,951 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

d-Tetramethrin:

Acute oral toxicity : LD50 (Mouse, female): 1,040 mg/kg

Acute toxicity estimate: 1,040 mg/kg
Method: Calculation method

Acute inhalation toxicity : LC50 (Rat): > 1.18 mg/l

Exposure time: 3 h
Test atmosphere: dust/mist

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

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Product:

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

Result : Repeated exposure may cause skin dryness or cracking.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Species : Rabbit
Result : Mild skin irritation
Remarks : Based on data from similar materials

Assessment : Repeated exposure may cause skin dryness or cracking.
Remarks : Based on data from similar materials

d-Tetramethrin:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

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

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Remarks : Based on data from similar materials

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
Remarks : Based on data from similar materials

d-Tetramethrin:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

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

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

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

d-Tetramethrin:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
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

d-Tetramethrin:

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

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Species	:	Rat
Application Route	:	inhalation (vapour)
Exposure time	:	105 weeks
Result	:	negative
Remarks	:	Based on data from similar materials

d-Tetramethrin:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Method	:	OECD Test Guideline 453
Result	:	positive
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Effects on fertility	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: inhalation (vapour) Result: negative Remarks: Based on data from similar materials
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (vapour) Result: negative Remarks: Based on data from similar materials

d-Tetramethrin:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rabbit Result: negative

STOT - single exposure

Not classified based on available information.

Components:

d-Tetramethrin:

Exposure routes	:	Inhalation
Target Organs	:	Nervous system
Assessment	:	Shown to produce significant health effects in animals at concentrations of >1.0 to 5.0 mg/l/4h.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Species	:	Rat
NOAEL	:	> 10,400 mg/m3
Application Route	:	inhalation (vapour)
Exposure time	:	13 Weeks
Remarks	:	Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

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.

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

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

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.01 mg/l Exposure time: 96 h Remarks: Based on data from similar materials LC50 : 0.0027 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.11 mg/l Exposure time: 48 h Remarks: Based on data from similar materials

EC50 (Daphnia magna (Water flea)): 0.0043 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EbC50 : > 0.0001 - < 0.001 mg/l
Exposure time: 96 h

NOEC : 0.01 mg/l
Exposure time: 96 h

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 88,444 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chron- : NOELR: 1 mg/l
Exposure time: 21 d

ic toxicity)

Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials
No toxicity at the limit of solubility

1R-trans Phenothrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0027 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.0043 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EbC50 : > 0.011 mg/l Exposure time: 72 h NOEC : 0.0036 mg/l Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	10

d-Tetramethrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0037 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.11 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.25 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOEC (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic toxicity)	:	100

12.2 Persistence and degradability

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 22.4 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 31.3 %
Exposure time: 28 d
Remarks: Based on data from similar materials

1R-trans Phenothrin:

Biodegradability : Result: Not readily biodegradable.

d-Tetramethrin:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 23 - 24 %
Exposure time: 28 d
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics:

Partition coefficient: n-octanol/water : Remarks: No data available

1R-trans Phenothrin:

Partition coefficient: n-octanol/water : log Pow: 6.8

d-Tetramethrin:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 827
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: > 4

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling 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.
Please ensure aerosol cans are sprayed completely empty (including propellant)

Waste Code : The following Waste Codes are only suggestions:

used product
16 05 04, gases in pressure containers (including halons) containing hazardous substances

unused product
16 05 04, gases in pressure containers (including halons) containing hazardous substances

uncleaned packagings
15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 1950
ADR	:	UN 1950
RID	:	UN 1950
IMDG	:	UN 1950
IATA	:	UN 1950

14.2 UN proper shipping name

ADN	:	AEROSOLS
ADR	:	AEROSOLS
RID	:	AEROSOLS
IMDG	:	AEROSOLS
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	2	2.1
ADR	:	2	2.1
RID	:	2	2.1
IMDG	:	2.1	
IATA	:	2.1	

14.4 Packing group

ADN

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1

ADR

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1
Tunnel restriction code	:	(D)

RID

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Hazard Identification Number	:	23
Labels	:	2.1

IMDG

Packing group	:	Not assigned by regulation
Labels	:	2.1

EmS Code : F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

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

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

Product Type	:	Insecticides, acaricides and products to control other arthropods
Active substance for use in biocides	:	0.15 % d-Tetramethrin 0.15 % 1R-trans Phenothrin

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P3a	FLAMMABLE AEROSOLS	150 t	500 t
E1	ENVIRONMENTAL HAZARDS	100 t	200 t
18	Liquefied flammable gases (including LPG) and natural gas	50 t	200 t

Other regulations:

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

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-Statements

H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H351	:	Suspected of causing cancer.
H371	:	May cause damage to organs.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
EUH066	:	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
STOT SE	:	Specific target organ toxicity - single exposure
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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

Classification of the mixture:		**Classification procedure:**
Aerosol 1	H222, H229	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

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.

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