SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : DIGRAIN WASPS & HORNETS DESTROYER

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

Recommended use(s): Insecticide - biocidal use
Use(s) advised against: Do not use for purposes other than those stated in "Recommended use(s)"

Use descriptor system (REACH) :

Not available.

1.3. Details of the supplier of the safety data sheet

Registered company name : (GB) LODI UK.

Address : Unit 104, Potter Space, 7 Kidderminster Road, Cutnall Green, Droitwich WR9 0NS.UNITED KINGDOM. tel : 01 384 40 42 42

Telephone : 02.99.08.48.59. Fax : 02 99 08 38 68.

fds@lodi.fr

https://www.lodi-group.fr/

1.4. Emergency telephone number :

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24- hour service)

General public:

England - Dial 111 to reach NHS 111 (24- hour service)

Scotland - Dial 112 to reach NHS 24 (24- hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24- hour service).

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).
Repeated exposure may cause skin dryness or cracking (EUH066).
Eye irritation, Category 2 (Eye Irrit. 2, H319).
May produce an allergic reaction (EUH208).
Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H336).
Aspiration hazard, Category 1 (Asp. Tox. 1, H304).
Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).
Hazardous to the aquatic environment - Chronic hazard, Category 1 (Aquatic Chronic 1, H410).
The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

2.2. Label elements

Biocidal mixture (see section 15).
The mixture is an aerosol fitted with a sealed spray attachment.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :


GHS02


GHS07


GHS09

Signal Word :
DANGER

Product identifiers :
EC 200-661-7 PROPAN-2-OL
EC 200-662-2 ACETONE

Additional labeling :
EUH208 Contains PERMETHRIN (ISO). May produce an allergic reaction.

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

EUH066	Repeated exposure may cause skin dryness or cracking.
Precautionary statements - General :	
P102	Keep out of reach of children.
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.
Precautionary statements - Response :	
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary statements - Storage :	
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Precautionary statements - Disposal :	
P501	Dispose of contents/container according to the regulation.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 59 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances> = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 BUTANE	GHS02, GHS04 Dgr Flam. Gas 1A, H220	C [i] [vii]	50 <= x % < 100
INDEX: 926_141_6 CAS: ^ EC: 926-141-6 REACH: 01-2119456620-43 HYDROCARBONS, C11-C14, N-ALKANES, ISOALKANES, CYCLIC, <2% AROMATICS	GHS08 Dgr Asp. Tox. 1, H304 EUH066		10 <= x % < 25
INDEX: 67_63_0D CAS: 67-63-0 EC: 200-661-7 REACH: 01-2119457558-25 PROPAN-2-OL	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[i]	2.5 <= x % < 10
INDEX: 606_001_00_8 CAS: 67-64-1 EC: 200-662-2 REACH: 01-2119471330-49 ACETONE	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[i]	2.5 <= x % < 10
INDEX: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 PROPANE	GHS02, GHS04 Dgr Flam. Gas 1A, H220	[i] [vii]	2.5 <= x % < 10
INDEX: 51_03_6C CAS: 51-03-6 EC: 200-076-6 REACH: 01-2119537431-46 PIPERONYL BUTOXIDE (ISO)	GHS07, GHS09 Wng Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1 EUH066		0 <= x % < 2.5

INDEX: 34590_94_8 CAS: 34590-94-8 EC: 252-104-2 DIPROPYLENE GLYCOL MONOMETHYL ETHER		[i]	0 <= x % < 2.5
INDEX: 613_058_00_2 CAS: 52645-53-1 EC: 258-067-9 PERMETHRIN (ISO)	GHS07, GHS09 Wng Acute Tox. 4, H302 Skin Sens. 1, H317 Acute Tox. 4, H332 Aquatic Acute 1, H400 M Acute = 1000 Aquatic Chronic 1, H410 M Chronic = 1000		0 <= x % < 2.5
INDEX: 607_727_008B CAS: 7696-12-0 EC: 231-711-6 TETRAMETHRIN (ISO)	GHS07, GHS09, GHS08 Wng Acute Tox. 4, H302 Carc. 2, H351 STOT SE 2, H371 Aquatic Acute 1, H400 M Acute = 100 Aquatic Chronic 1, H410 M Chronic = 100	[ii]	0 <= x % < 2.5
INDEX: 101_84_8 CAS: 101-84-8 EC: 202-981-2 DIPHENYL ETHER	GHS07, GHS09 Wng Eye Irrit. 2, H319 Aquatic Chronic 3, H412 Aquatic Acute 1, H400 M Acute = 1	[i]	0 <= x % < 2.5
INDEX: 80_56_8_B CAS: 80-56-8 EC: 201-291-9 REACH: 01-2119979519-16 ALPHA-PINENE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[i]	0 <= x % < 2.5
INDEX: 5392_40_5 CAS: 5392-40-5 EC: 226-394-6 CITRAL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319	[i]	0 <= x % < 2.5
INDEX: 606_020_00_1 CAS: 541-85-5 EC: 208-793-7 5-METHYLHEPTAN-3-ONE	GHS07 Wng Eye Irrit. 2, H319 STOT SE 3, H335	[i]	0 <= x % < 2.5
INDEX: 606-001-00-8 CAS: 67-64-1 EC: 200-662-2 ACETONE	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[i]	0 <= x % < 2.5

Specific concentration limits:

Identification	Specific concentration limits	ATE
INDEX: 67_63_0D CAS: 67-63-0 EC: 200-661-7 REACH: 01-2119457558-25 PROPAN-2-OL		dermal: ATE = 13900 mg/kg BW oral: ATE = 5840 mg/kg BW

INDEX: 606_001_00_8 CAS: 67-64-1 EC: 200-662-2 REACH: 01-2119471330-49 ACETONE		inhalation: ATE = 76 mg/l 4h (dust/mist) oral: ATE = 5800 mg/kg BW
INDEX: 34590_94_8 CAS: 34590-94-8 EC: 252-104-2 DIPROPYLENE GLYCOL MONOMETHYL ETHER		inhalation: ATE = 3.40447 mg/l (vapours) dermal: ATE = 9510 mg/kg BW
INDEX: 613_058_00_2 CAS: 52645-53-1 EC: 258-067-9 PERMETHRIN (ISO)		oral: ATE = 554 mg/kg BW
INDEX: 101_84_8 CAS: 101-84-8 EC: 202-981-2 DIPHENYL ETHER		dermal: ATE = 7940 mg/kg BW oral: ATE = 5500 mg/kg BW
INDEX: 80_56_8_B CAS: 80-56-8 EC: 201-291-9 REACH: 01-2119979519-16 ALPHA-PINENE		oral: ATE = 500 mg/kg BW
INDEX: 5392_40_5 CAS: 5392-40-5 EC: 226-394-6 CITRAL		dermal: ATE = 2250 mg/kg BW oral: ATE = 4950 mg/kg BW
INDEX: 606_020_00_1 CAS: 541-85-5 EC: 208-793-7 5-METHYLHEPTAN-3-ONE		oral: ATE = 2760 mg/kg BW

Information on ingredients :

(Full text of H-phrases: see section 16)

[i] Substance for which maximum workplace exposure limits are available.

[ii] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

[vii] Propellant gas

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary.

If breathing is irregular or has stopped, effect mouth-to-mouth resuscitation and call a doctor.

In the event of an allergic reaction, seek medical attention.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

If swallowed accidentally, do not allow to drink, do not induce vomiting and transfer to hospital immediately by ambulance. Show the label to the doctor.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Specific and immediate treatment :

Treat symptomatically.

Information for the doctor :

Treat symptomatically.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

Keep packages near the fire cool, to prevent pressurised containers from bursting.

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO_2)

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

Avoid inhaling the vapors.

Avoid any contact with the skin and eyes.

If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Fire prevention :

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Never inhale this mixture.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Avoid inhaling vapors. Carry out any industrial operation which may give rise to this in a sealed apparatus.

Provide vapor extraction at the emission source and also general ventilation of the premises.

Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions.

In all cases, recover emissions at source.

Avoid skin and eye contact with this mixture.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

Never open the packages under pressure.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry, well-ventilated place.

Keep away from food and drink, including those for animals.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Packaging

Always keep in packaging made of an identical material to the original.

Recommended types of packaging :

Original packaging.

Suitable packaging materials :

Original packaging.

Unsuitable packaging materials :

Different that the original packaging.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- UK :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8 BUTANE	600 ppm 1450 mg/m3	750 ppm 1810 mg/m3			
67-63-0 PROPAN-2-OL	400 ppm 999 mg/m3	500 ppm 1250 mg/m3			
67-64-1 ACETONE	500 ppm 1210 mg/m3	1500 ppm 3620 mg/m3			
34590-94-8 DIPROPYLENE GLYCOL MONOMETHYL ETHER	50 ppm 308 mg/m3				
101-84-8 DIPHENYL ETHER	1 ppm 7 mg/m3	2 ppm 14 mg/m3			
541-85-5 5-METHYLHEPTAN-3-ONE	10 ppm 53 mg/m3	20 ppm 107 mg/m3			
67-64-1 ACETONE	500 ppm 1210 mg/m3	1500 ppm 3620 mg/m3			

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

5-METHYLHEPTAN-3-ONE (CAS: 541-85-5)

Final use:	**Workers.**
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	3 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects
DNEL :	10.759 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	53 mg of substance/m3

CITRAL (CAS: 5392-40-5)

Final use:	**Workers.**
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	1.7 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	9 mg of substance/m3
Final use:	**Consumers.**
Exposure method:	Ingestion.
Potential health effects:	Long term systemic effects.
DNEL :	0.6 mg/kg body weight/day
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	1 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	2.7 mg of substance/m3

DIPHENYL ETHER (CAS: 101-84-8)

Final use:	**Workers.**
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	25 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	14 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	59 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term local effects.
DNEL :	7 mg of substance/m3

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)

Final use:	**Workers.**
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	283 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	308 mg of substance/m3
Final use:	**Consumers.**
Exposure method:	Ingestion.
Potential health effects:	Long term systemic effects.
DNEL :	36 mg/kg body weight/day
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	121 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	37.2 mg of substance/m3

ACETONE (CAS: 67-64-1)

Final use:	**Workers.**
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	186 mg/kg body weight/day
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	2420 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Short term systemic effects.
DNEL :	1210 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term local effects.
DNEL :	1210 mg of substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	1210 mg of substance/m3

Predicted no effect concentration (PNEC):

5-METHYLHEPTAN-3-ONE (CAS: 541-85-5)

Environmental compartment:	Soil.
PNEC :	0.17 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0.04 mg/l
Environmental compartment:	Sea water.
PNEC :	0.004 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	0.4 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.96 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	0.096 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	25 mg/l

CITRAL (CAS: 5392-40-5)

Environmental compartment:	Soil.
PNEC :	0.021 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0.007 mg/l
Environmental compartment:	Sea water.
PNEC :	0.001 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	0.068 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.125 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	0.013 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	1.6 mg/l

DIPHENYL ETHER (CAS: 101-84-8)

Environmental compartment:	Soil.
PNEC :	0.018 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0 mg/l
Environmental compartment:	Sea water.
PNEC :	0 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	0.005 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.093 mg/kg

Environmental compartment: Marine sediment.
PNEC : 0.009 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 10 mg/l

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)
Environmental compartment: Soil.
PNEC : 2.74 mg/kg

Environmental compartment: Fresh water.
PNEC : 19 mg/l

Environmental compartment: Sea water.
PNEC : 1.9 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 190 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 70.2 mg/kg

Environmental compartment: Marine sediment.
PNEC : 7.02 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 4168 mg/l

ACETONE (CAS: 67-64-1)
Environmental compartment: Soil.
PNEC : 29.5 mg/kg

Environmental compartment: Fresh water.
PNEC : 10.6 mg/l

Environmental compartment: Sea water.
PNEC : 1.06 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 21 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 30.4 mg/kg

Environmental compartment: Marine sediment.
PNEC : 3.04 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 100 mg/l

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- PVA (Polyvinyl alcohol)
- Butyl Rubber (Isobutylene-isoprene copolymer)

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid inhaling vapors.

If the ventilation is insufficient, wear appropriate breathing apparatus.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid. Spray.

Colour

Unspecified

Odour

Odour threshold :	Not stated.

Melting point

Melting point/melting range :	Not relevant.

Freezing point

Freezing point / Freezing range :	Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not relevant.

Flammability

Flammability (solid, gas) :	Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) :	Not stated.
Explosive properties, upper explosivity limit (%) :	Not stated.

Flash point

Flash point interval :	Not relevant.

Auto-ignition temperature

Self-ignition temperature :	Not relevant.

Decomposition temperature

Decomposition point/decomposition range :	Not relevant.

pH

pH (aqueous solution) :	Not stated.
pH :	Not relevant.

Kinematic viscosity

Viscosity :	Not stated.
Viscosity:	v < 7 mm2/s (40°C)

Solubility

Water solubility :	Insoluble.
Fat solubility :	Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water :	Not stated.

Vapour pressure

Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).

Density and/or relative density

Density :	< 1

Relative vapour density

Vapour density :	Not stated.

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

Aerosols

Chemical combustion heat :	>= 30 kJ/g.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- heating
- heat

10.5. Incompatible materials

None.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO2

SECTION 11 : TOXICOLOGICAL INFORMATION

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

11.1.1. Substances

a) Acute toxicity :

5-METHYLHEPTAN-3-ONE (CAS: 541-85-5)

Oral route :	LD50 = 2760 mg/kg body weight
Dermal route :	LD50 > 2000 mg/kg body weight
Inhalation route (Dusts/mist) :	LC50 > 20 mg/l

CITRAL (CAS: 5392-40-5)

Oral route :	LD50 = 4950 mg/kg body weight Species : Rat
Dermal route :	LD50 = 2250 mg/kg body weight Species : Rabbit
Inhalation route (Dusts/mist) :	LC50 > 20 mg/l

ALPHA-PINENE (CAS: 80-56-8)

Oral route :	LD50 = 500 mg/kg body weight

DIPHENYL ETHER (CAS: 101-84-8)

Oral route :	LD50 = 5500 mg/kg body weight Species : Rat
Dermal route :	LD50 = 7940 mg/kg body weight Species : Rabbit
Inhalation route (Dusts/mist) :	LC50 > 5 mg/l

TETRAMETHRIN (ISO) (CAS: 7696-12-0)

Oral route :	LD50 > 2000 mg/kg body weight Species : Rat OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)
Dermal route :	LD50 > 2000 mg/kg body weight Species : Rat OECD Guideline 402 (Acute Dermal Toxicity)
Inhalation route (Dusts/mist) :	LC50 > 5.63 mg/l Species : Rat OECD Guideline 403 (Acute Inhalation Toxicity)

PERMETHRIN (ISO) (CAS: 52645-53-1)

Oral route :	LD50 = 554 mg/kg body weight Species : Rat OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)
Dermal route :	LD50 > 2000 mg/kg body weight Species : Rat OECD Guideline 402 (Acute Dermal Toxicity)
Inhalation route (Dusts/mist) :	LC50 > 4.638 mg/l Species : Rat OECD Guideline 403 (Acute Inhalation Toxicity)

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)

Oral route :	LD50 > 5000 mg/kg body weight Species : Rat
Dermal route :	LD50 = 9510 mg/kg body weight Species : Rabbit
Inhalation route (Vapours) :	LC50 = 3.40447 mg/l Species : Rat

PIPERONYL BUTOXIDE (ISO) (CAS: 51-03-6)

Oral route :	LD50 > 2000 mg/kg body weight Species : Rat OECD Guideline 401 (Acute Oral Toxicity)
Dermal route :	LD50 > 2000 mg/kg body weight Species : Rabbit OECD Guideline 402 (Acute Dermal Toxicity)
Inhalation route (Dusts/mist) :	LC50 > 5.9 mg/l Species : Rat OECD Guideline 403 (Acute Inhalation Toxicity)

ACETONE (CAS: 67-64-1)

Oral route :	LD50 = 5800 mg/kg body weight Species : Rat
Dermal route :	LD50 > 15800 mg/kg body weight Species : Rat
Inhalation route (Dusts/mist) :	LC50 = 76 mg/l Duration of exposure : 4 h

PROPAN-2-OL (CAS: 67-63-0)

Oral route :	LD50 = 5840 mg/kg body weight Species : Rat
Dermal route :	LD50 = 13900 mg/kg body weight Species : Rat
Inhalation route (Vapours) :	LC50 > 25 mg/l Species : Rat

HYDROCARBONS, C11-C14, N-ALKANES, ISOALKANES, CYCLIC, <2% AROMATICS (CAS: ^)

Oral route :	LD50 > 5000 mg/kg body weight Species : Rat OECD Guideline 401 (Acute Oral Toxicity)
Dermal route :	LD50 > 2000 mg/kg body weight Species : Rabbit OECD Guideline 402 (Acute Dermal Toxicity)
Inhalation route (Vapours) :	LC50 > 5000 mg/m3 OECD Guideline 403 (Acute Inhalation Toxicity) Duration of exposure : 4 h

b) Skin corrosion/skin irritation :

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

c) Serious damage to eyes/eye irritation :

No data available.

d) Respiratory or skin sensitisation :

HYDROCARBONS, C11-C14, N-ALKANES, ISOALKANES, CYCLIC, <2% AROMATICS (CAS: ^)
Guinea Pig Maximisation Test (GMPT) : Non-sensitiser.
OECD Guideline 406 (Skin Sensitisation)

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

No data available.

11.1.2. Mixture

11.1.2.1 Information on hazard classes

a) Acute toxicity :

No data available.

b) Skin corrosion/skin irritation :

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

c) Serious damage to eyes/eye irritation :

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Splashes in the eyes may cause irritation and reversible damage

d) Respiratory or skin sensitisation :

Contains at least one sensitising substance. May cause an allergic reaction.

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

Narcotic effects may occur, such as drowsiness, narcosis, decreased alertness, loss of reflexes, lack of coordination or dizziness.

Effects may also occur in the form of violent headaches or nausea, judgement disorder, giddiness, irritability, fatigue or memory disturbance.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

May be fatal if swallowed and enters airways.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

11.1.2.2 Other information

Symptoms related to the physical, chemical and toxicological characteristics

Exposure to vapours from solvents in the mixture in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms produced will include headaches, numbness, dizziness, fatigue, muscular asthenia and, in extreme cases, loss of consciousness.

Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 97-53-0 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 5989-27-5 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 52645-53-1 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 51-03-6 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

CAS 67-63-0 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

11.2. Information on other hazards

Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

SECTION 12 : ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

TETRAMETHRIN (ISO) (CAS: 7696-12-0)

Fish toxicity : LC50 = 0.033 mg/l
M-Factor = 100
Species : Brachydanio rerio

Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

NOEC = 0.72 mg/l
M-Factor = 100
Species : Others

Crustacean toxicity : EC50 = 0.47 mg/l
M-Factor = 100
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 1.36 mg/l
Species : Scenedesmus subspicatus
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

NOEC = 0.72 mg/l
Species : Scenedesmus subspicatus
OECD Guideline 201 (Alga, Growth Inhibition Test)

PERMETHRIN (ISO) (CAS: 52645-53-1)

Fish toxicity : LC50 = 0.009 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 0.00064 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)

Fish toxicity : LC50 > 10000 mg/l
Species : Poecilia reticulata
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 1919 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

NOEC = 0.5 mg/l
Species : Daphnia magna

Algae toxicity : ECr50 > 969 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 96 h

PIPERONYL BUTOXIDE (ISO) (CAS: 51-03-6)

Fish toxicity : LC50 = 3.94 mg/l
Species : Cyprinodon variegatus
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

NOEC = 0.18 mg/l
Species : Pimephales promelas
EPA OPP 72-4 (Fish Early Life-Stage and Aquatic Invertebrate Life-Cycle Studies)

Crustacean toxicity : EC50 = 0.51 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

NOEC = 0.03 mg/l
M-Factor = 1
Species : Daphnia magna
Duration of exposure : 21 days

Algae toxicity : ECr50 = 3.89 mg/l
Species : Selenastrum capricornutum
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

NOEC = 0.824 mg/l
Species : Selenastrum capricornutum
OECD Guideline 201 (Alga, Growth Inhibition Test)

ACETONE (CAS: 67-64-1)

Fish toxicity :
LC50 = 5540 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h

Crustacean toxicity :
EC50 = 8800 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

NOEC = 2212 mg/l
Species : Daphnia magna
Duration of exposure : 28 days

Algae toxicity :
NOEC = 430 mg/l
Duration of exposure : 48 h

PROPAN-2-OL (CAS: 67-63-0)

Fish toxicity :
LC50 > 9640 mg/l
Species : Pimephales promelas
Duration of exposure : 96 h

Crustacean toxicity :
EC50 > 10000 mg/l
Species : Daphnia magna
Duration of exposure : 24 h

HYDROCARBONS, C11-C14, N-ALKANES, ISOALKANES, CYCLIC, <2% AROMATICS (CAS: ^)

Fish toxicity :
LC50 > 1000 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

NOEC = 0.17 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 28 days

Crustacean toxicity :
EC50 > 1000 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

NOEC = 1.22 mg/l
Species : Daphnia magna

Algae toxicity :
ECr50 > 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

NOEC = 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

CITRAL (CAS: 5392-40-5)

Fish toxicity :
LC50 = 6.1 mg/l
Species : Oryzias latipes
Duration of exposure : 24 h

Crustacean toxicity :
EC50 = 11 mg/l
Species : Daphnia magna
Duration of exposure : 24 h

Algae toxicity :
ECr50 = 16 mg/l
Species : Scenedesmus subspicatus
Duration of exposure : 72 h

DIPHENYL ETHER (CAS: 101-84-8)

Fish toxicity :
LC50 <= 1 mg/l
Duration of exposure : 96 h

Crustacean toxicity :
EC50 <= 1 mg/l
Duration of exposure : 48 h

Algae toxicity :
ECr50 <= 1 mg/l
Duration of exposure : 72 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

DIPHENYL ETHER (CAS: 101-84-8)
Biodegradability : Rapidly degradable.

TETRAMETHRIN (ISO) (CAS: 7696-12-0)
Biodegradability : Non-rapidly degradable.

PERMETHRIN (ISO) (CAS: 52645-53-1)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)
Biodegradability : Rapidly degradable.

PIPERONYL BUTOXIDE (ISO) (CAS: 51-03-6)
Biodegradability : Non-rapidly degradable.

ACETONE (CAS: 67-64-1)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

HYDROCARBONS, C11-C14, N-ALKANES, ISOALKANES, CYCLIC, <2% AROMATICS (CAS: ^)
Biodegradability : Rapidly degradable.

CITRAL (CAS: 5392-40-5)
Chemical oxygen demand : DCO = 1.99 g/g

Five-day biochemical oxygen demand : DBO5 = 0.56

Biodegradability : Non-rapidly degradable.
BOD5/COD = 0.28

PROPAN-2-OL (CAS: 67-63-0)
Chemical oxygen demand : DCO = 2294000 mg/kg

Five-day biochemical oxygen demand : DBO5 = 1171000 mg/kg

Biodegradability : Rapidly degradable.

12.3. Bioaccumulative potential

12.3.1. Substances

CITRAL (CAS: 5392-40-5)
Bioaccumulation : FBC = 10

DIPHENYL ETHER (CAS: 101-84-8)
Bioaccumulation : FBC = 196

TETRAMETHRIN (ISO) (CAS: 7696-12-0)
Octanol/water partition coefficient : Log Kow > 4.09

PERMETHRIN (ISO) (CAS: 52645-53-1)
Octanol/water partition coefficient : Log Kow = 6.5

DIPROPYLENE GLYCOL MONOMETHYL ETHER (CAS: 34590-94-8)
Octanol/water partition coefficient : Log Kow = 0.006

PIPERONYL BUTOXIDE (ISO) (CAS: 51-03-6)
Octanol/water partition coefficient : Log Kow = 4.8
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

Bioaccumulation : FBC = 290
Species : Lepomis macrochirus (Fish)

ACETONE (CAS: 67-64-1)
Octanol/water partition coefficient : Log Kow = -0.24

Bioaccumulation : FBC = 3

PROPAN-2-OL (CAS: 67-63-0)
Octanol/water partition coefficient : Log Kow = 0.05

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2025 - IMDG 2024 [42-24] - ICAO/IATA 2026 [67]).

14.1. UN number or ID number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification :

2.1

14.4. Packing group

-

14.5. Environmental hazards

- Environmentally hazardous material :

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	2	See SP63	-	See SP277	F-D. S-U	63 190 277 327 344 381 959	E0	- SW1 SW22	SG69

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0
	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):(permethrin (iso))

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15 : REGULATORY INFORMATION

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

Classification and labelling information included in section 2:

The following regulations have been used:

- Directive 75/324/CEE modified by directive 2013/10/UE
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2020/1182 (ATP15)

Container information:

No data available.

Particular provisions :

No data available.

Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

Authorisations agreed under Title VII of Regulation (EC) No.1907/2006 (REACH):

The mixture does not contain any substance subject to authorisation according to Annex XIV of REACH Regulation (EC) No 1907/2006: https://echa.europa.eu/fr/authorisation-list.

Ozone-depleting substances (Regulation (EC) No 2024/590).

The mixture does not contain any substance posing a risk to the ozone layer.

Persistent organic pollutants (POP) (Regulation (EU) 2019/1021):

The mixture does not contain a persistent organic pollutant.

PIC Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (Rotterdam Convention):

The mixture is subject to the Prior Informed Consent (PIC) procedure.

The mixture contains a substance subject to the export notification procedure requirement.
52645-53-1 PERMETHRIN (ISO)

Explosives precursors :

The mixture contains at least one substance subject to the Poisons act 1972 and control of explosives precursors and poisons regulations Regulation of 2023 (UK):

- Acetone (CAS 67-64-1)

The acquisition, introduction, possession or use of this restricted explosive precursor by members of the general public is subject to the reporting obligations.

Labelling for biocidal products (Regulation (UE) n° 528/2012) :

Name	CAS	%	Product-type
TETRAMETHRIN (ISO)	7696-12-0	2.4 g/l	18
PERMETHRIN (ISO)	52645-53-1	2.5 g/l	18

Product-type 18 : Insecticides, acaricides and products to control other arthropods.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Wording of the phrases mentioned in section 3 :

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.
H412	Harmful to aquatic life with long lasting effects.

EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.
LC50 : The concentration of a test substance resulting in 50% lethality in a given period.
EC50 : The effective concentration of substance that causes 50% of the maximum response.
ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.
LQ : Limited Quantity
EQ : Excepted Quantity
EmS : Emergency Schedule
E : Packing Instruction
NOEC : The concentration with no observed effect.
REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.
ATE : Acute Toxicity Estimate
BW : Body Weight
DNEL : Derived No-Effect Level
PNEC : Predicted No-Effect Concentration
CMR: Carcinogenic, mutagenic or reprotoxic.
UFI : Unique formulation identifier.
STEL : Short-term exposure limit
TWA : Time-Weighted Average
TMP : French Occupational Illness table
VLE : Threshold Limit Value (exposure)
VME : Average Exposure Value.
VLRI : Indicative limit value
VLRC : Indicative constraint value
ADR : Agreement concerning the international carriage of dangerous goods by road.
GHS02 : Flame
GHS07 : Exclamation mark
GHS09 : Environment
IATA : International Air Transport Association.
IMDG : International Maritime Dangerous Goods.
ICAO : International Civil Aviation Organisation
PBT: Persistent, bioaccumulable and toxic.
PIC: Prior Informed Consent.
POP: Persistent Organic Pollutant.
RID : Regulations concerning the International carriage of Dangerous goods by rail.
SVHC : Substances of very high concern.
WGK : Water Hazard Class.

The information contained in this safety data sheet is based on our current knowledge at the time of publication and is provided in good faith. It does not constitute any guarantee of specific product properties nor establish any contractual relationship. The user remains solely responsible for safe and compliant use of the product in accordance with current regulations.
