

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

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

1.1. Product identifier

Product name : Spray dégivrant / Ontdooier / Auftaumittel

Product code : 064000140F.

UFI : JG9P-QE8R-8X5X-JTHH

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

Defrosting windows and locks.

1.3. Details of the supplier of the safety data sheet

Registered company name : FOREVER PRODUCTS N.V..

Address : 122 rue de la Glacerie.6180.COURCELLES.Belgique.

Telephone : 071/46.85.15. Fax : 071/46.85.69.

chulin@forever-products.be

www.forever-products.be

Contactpersoon, personne à cont.: Christelle Hulin

1.4. Emergency telephone number : 070 245 245.

Association/Organisation : Antigifcentrum België, centre anti-poison.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Flammable liquid, Category 3 (Flam. Liq. 3, H226).

Eye irritation, Category 2 (Eye Irrit. 2, H319).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

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

Hazard pictograms :



GHS02



GHS07

Signal Word :

WARNING

Hazard statements :

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements - General :

P101 If medical advice is needed, have product container or label at hand.

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.

P280 Wear protective clothing / eye / face protection.

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.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Precautionary statements - Disposal :

P501 Dispose of contents/container in compliance with regulations.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European CHemicals Agency (ECHA) under article 57 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	(EC) 1272/2008	Note	%
CAS: 64-17-5 EC: 200-578-6 REACH: 01-2119457610-43 ETHANOL	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1]	50 <= x % < 100
INDEX: 603-027-00-1 CAS: 107-21-1 EC: 203-473-3 REACH: 01-2119456816-28 ETHANEDIOL	GHS07 Wng Acute Tox. 4, H302	[1]	0 <= x % < 2.5
INDEX: 606-002-00-3 CAS: 78-93-3 EC: 201-159-0 REACH: 01-2119457290-43 BUTANONE	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH:066	[1]	0 <= x % < 1
INDEX: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH: 01-2119457558-25 PROPAN-2-OL	GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1]	0 <= x % < 1

Specific concentration limits:

Identification	Specific concentration limits	ATE
CAS: 64-17-5 EC: 200-578-6 REACH: 01-2119457610-43 ETHANOL		inhalation: ATE = 124.7 mg/l 4h (vapours) oral: ATE = 10470 mg/kg BW

Information on ingredients :

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

Denatonium benzoate, EC No. 223-095-2, in quantities below its regulatory thresholds.

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

SECTION 4 : FIRST AID MEASURES

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

Never give anything by mouth to an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

Remove to fresh air

In the event of splashes or contact with eyes :

Wash with plenty of clean, fresh water for several minutes.

If irritation persists, consult a Ophthalmology.

In the event of splashes or contact with skin :

Remove soaked clothing and cleanse skin with soap and water.

In the event of swallowing :

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

Rinse mouth with water and consult a doctor showing the product label.

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

Irritating to eyes.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- foam
- carbon dioxide (CO₂)
- powder dries

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

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

- carbon monoxide (CO)
- carbon dioxide (CO₂)

5.3. Advice for firefighters

Cool containers / holding tank with water spray.

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 first aid worker

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

6.2. Environmental precautions

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Collect liquid with absorbent material sand, diatomite, binders, universal binders, sawdust, ...

6.4. Reference to other sections

See paragraphs 8 and 13 for more information.

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

Handle in well-ventilated areas.

Fire prevention :

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

Recommended equipment and procedures :

For personal protection, see section 8.

Prohibited equipment and procedures :

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

7.2. Conditions for safe storage, including any incompatibilities

Keep the container tightly closed in a well ventilated place

Storage

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

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- European Union (2022/431, 2019/1831, 2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m3 :	VME-ppm :	VLE-mg/m3 :	VLE-ppm :	Notes :
107-21-1	52	20	104	40	Peau
78-93-3	600	200	900	300	-

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
64-17-5		1000 ppm		A3	
107-21-1	-	-	100	-	-
78-93-3	200 ppm	300 ppm		BEI	
67-63-0	200 ppm	400 ppm		A4; BEI	

- Belgium (Royal decree of 11/05/2021) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
64-17-5	1000 ppm 1907 mg/m ³				
107-21-1	-	-	101	-	-
78-93-3	200 ppm 600 mg/m ³	300 ppm 900 mg/m ³			
67-63-0	200 ppm 500 mg/m ³	400 ppm 1000 mg/m ³			

- France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021) :

CAS	VME-ppm :	VME-mg/m3 :	VLE-ppm :	VLE-mg/m3 :	Notes :	TMP No :
64-17-5	1000	1900	5000	9500	-	84
107-21-1	20	52	40	104	*	84
78-93-3	200	600	300	900	*	84
67-63-0	-	-	400	980	-	84

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
64-17-5	1000 ppm 1920 mg/m ³				
107-21-1	20 ppm 52 mg/m ³	40 ppm 104 mg/m ³		Sk	
78-93-3	200 ppm 600 mg/m ³	300 ppm 899 mg/m ³		Sk. BMGV	
67-63-0	400 ppm 999 mg/m ³	500 ppm 1250 mg/m ³			

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

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

Final use:

Exposure method:

Potential health effects:

DNEL :

Workers.

Dermal contact.

Long term systemic effects.

888 mg/kg body weight/day

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Long term systemic effects.

500 mg of substance/m³

Final use:

Exposure method:

Potential health effects:

DNEL :

Consumers.

Ingestion.

Long term systemic effects.

26 mg/kg body weight/day

Exposure method:

Potential health effects:

DNEL :

Dermal contact.

Long term systemic effects.

319 mg/kg body weight/day

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Long term systemic effects.

89 mg of substance/m³

BUTANONE (CAS: 78-93-3)

Final use:

Exposure method:

Potential health effects:

DNEL :

Workers.

Dermal contact.

Long term systemic effects.

1161 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 600 mg of substance/m3

Final use:

Consumers.

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 31 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 412 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 106 mg of substance/m3

ETHANOL (CAS: 64-17-5)

Final use:

Workers.

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 343 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 1900 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 950 mg of substance/m3

Final use:

Consumers.

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 87 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 206 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 950 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 114 mg of substance/m3

Predicted no effect concentration (PNEC):

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

Environmental compartment: Soil.
PNEC : 28 mg/kg

Environmental compartment: Fresh water.
PNEC : 140.9 mg/l

Environmental compartment: Sea water.
PNEC : 140.9 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 140.9 mg/l

Environmental compartment: PNEC :	Fresh water sediment. 552 mg/kg
Environmental compartment: PNEC :	Marine sediment. 552 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 2251 mg/l
BUTANONE (CAS: 78-93-3) Environmental compartment: PNEC :	Soil. 22.5 mg/kg
Environmental compartment: PNEC :	Fresh water. 55.8 mg/l
Environmental compartment: PNEC :	Sea water. 55.8 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 55.8 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 284.74 mg/kg
Environmental compartment: PNEC :	Marine sediment. 284.7 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 709 mg/l
ETHANOL (CAS: 64-17-5) Environmental compartment: PNEC :	Soil. 0.63 mg/kg
Environmental compartment: PNEC :	Fresh water. 0.96 mg/l
Environmental compartment: PNEC :	Sea water. 0.79 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 2.75 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 3.6 mg/kg
Environmental compartment: PNEC :	Marine sediment. 2.9 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 580 mg/l
Environmental compartment: PNEC :	Vermivore predators (oral). 0.72 g/kg

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

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

**- Eye / face protection**

Wear safety goggles in case of projection .

- Hand protection

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

- Body protection

Wear suitable clothing

- Respiratory protection

If ventilation is inadequate, wear a respirator.

Use respiratory protective device to perform operations that may result in exposure to product vapors.

Filter type A.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****Physical state**

Physical state :	Fluid liquid.
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Colour

Color:	blue
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Odour

Odour threshold :	Not stated.
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Melting point

Melting point/melting range :	Not specified.
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Freezing point

Freezing point / Freezing range :	Not stated.
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Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not specified.
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Flammability

Flammability (solid, gas) :	Not stated.
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Lower and upper explosion limit

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

Flash Point :	25.00 °C.
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Auto-ignition temperature

Self-ignition temperature :	Not specified.
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Decomposition temperature

Decomposition point/decomposition range :	Not specified.
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pH

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

Viscosity :	Not stated.
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Solubility

Water solubility :	Soluble.
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Fat solubility :	Not stated.
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Partition coefficient n-octanol/water (log value)

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

Vapour pressure (50°C) :	Not relevant.
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Density and/or relative density

Density :	0.933 +/- 0.010
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Relative vapour density

Vapour density :	Not stated.
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9.2. Other information

% VOC :	53 %
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9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

See the sections below.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

None under normal conditions of use.

10.4. Conditions to avoid

Avoid :

- heating
- heat
- flames and hot surfaces
- Sources of ignition

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No decomposition products when used as directed.

SECTION 11 : TOXICOLOGICAL INFORMATION

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

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

11.1.1. Substances

Acute toxicity :

ETHANOL (CAS: 64-17-5)

Oral route :

LD50 = 10470 mg/kg

Species : Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route :

LD50 > 2000 mg/kg

Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Vapours) :

LC50 = 124.7 mg/l

Species : Rat

OECD Guideline 403 (Acute Inhalation Toxicity)

Duration of exposure : 4 h

11.1.2. Mixture

Serious damage to eyes/eye irritation :

Irritating to eyes.

11.2. Information on other hazards

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

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

CAS 64-17-5 : IARC Group 1 : The agent is carcinogenic to humans.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

ETHANOL (CAS: 64-17-5)

Fish toxicity :

LC50 = 15300 mg/l

Species : Pimephales promelas

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 12340 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

NOEC > 10 mg/l

Species : Daphnia magna

Duration of exposure : 21 days

Algae toxicity :

ECr50 = 275 mg/l

Species : Chlorella vulgaris

Duration of exposure : 72 h

NOEC = 3240 mg/l

Species : Skeletonema costatum

Aquatic plant toxicity :

NOEC = 3240 mg/l

Species : Others

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

ETHANOL (CAS: 64-17-5)

Biodegradability :

Rapidly degradable.

12.3. Bioaccumulative potential

12.3.1. Substances

ETHANOL (CAS: 64-17-5)

Octanol/water partition coefficient :

log K_{ow} = -0.35

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No data available.

German regulations concerning the classification of hazards for water (WGK, AwSV Annex I, KBws) :

WGK 1 : Slightly hazardous for water.

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, preferably 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 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

14.1. UN number or ID number

1993

14.2. UN proper shipping nameUN1993=FLAMMABLE LIQUID, N.O.S.
(ethanol)**14.3. Transport hazard class(es)**

- Classification :



3

14.4. Packing group

III

14.5. Environmental hazards

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14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	3	F1	III	3	30	5 L	274 601	E1	3	D/E
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation	
	3	-	III	5 L	F-E. S-E	223 274 955	E1	Category A	-	
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	3	-	III	355	60 L	366	220 L	A3	E1	
	3	-	III	Y344	10 L	-	-	A3	E1	

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.

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:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2016/1179. (ATP 9)

- Container information:

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>.**- Particular provisions :**

No data available.

- German regulations concerning the classification of hazards for water (WGK, AwSV Annex I, KBws) :

WGK 1 : Slightly hazardous for water.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

This sheet complements the technical instructions for use, but does not replace them. The information it contains are based on our knowledge of the product concerned on the date indicated. They are given in good faith. The attention of users is also drawn to the possible risks incurred when a product is utilisé for purposes other than those for which it is designed.

It does in no way the user from knowing and applying all texts governing his activity. It will take under its sole responsibility the precautions related to the use he makes of the product.

The regulatory requirements referred merely to assist the recipient to fulfill its obligations when using the product dangerous. This list should not be considered exhaustive and does not ensure the recipient qu'éventuellement other obligations incumbent on him not because of texts other than those cited for the holding and handling of the product for which it is solely responsible .

Wording of the phrases mentioned in section 3 :

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations :

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.

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

UFI : Unique formulation identifier.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

TMP : French Occupational Illness table

TLV : Threshold Limit Value (exposure)

AEV : Average Exposure Value.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS02 : Flame

GHS07 : Exclamation mark

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.