

# 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: FLEXIPAINT PEINTURE POUR PNEUMATIQUE PVC NOIR

Product code: RP74356.

UFI: 0NS0-K0K4-W008-0KEG

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

N/A

## 1.3. Details of the supplier of the safety data sheet

Registered company name: SOROMAP PEINTURES VERNIS.

Address: 1, RUE MAURICE MALLET Z.I. DE BELIGON.17300.ROCHEFORT SUR MER.FRANCE.

Telephone: 05.46.88.36.10. Fax: 05.46.88.36.15.

contact@soromap.com www.soromap.com

## 1.4. Emergency telephone number: +33 (0)1 45 42 59 59.

Association/Organisation: INRS / ORFILA http://www.centres-antipoison.net.

## 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).

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Serious eye damage, Category 1 (Eye Dam. 1, H318).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H335).

Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H336).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

The propellant gas is taken into account when determining the health and environmental classification of the mixture.

## 2.2. Label elements

Mixture for aerosol application.

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

Hazard pictograms:







GHS02

GHS05

GHS07

Signal Word : DANGER

Product identifiers:

EC 918-668-5 HYDROCARBONS, C9, AROMATICS

REACTION MASS OF ETHYLBENZENE AND XYLENE

CAS 109159-24-2 RESINE POLYURETHANNE

EC 203-631-1 CYCLOHEXANONE

REACTION PRODUCTS WITH DECANEDIOIC ACID,

BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL) ESTER AND DECANEDIOIC ACID, METHYL

1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL ESTER

REACTION MASS OF FATTY ACIDS, TALL-OIL, COMPDS. WITH OLEYLAMINE AND FATTY

ACIDS, C18-UNSATD., TRIMERS, COMPDS. WITH OLEYLAMINE

Hazard statements:

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

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.

Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements - Disposal :

P501 Dispose of contents/container by approved organization

#### 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 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 $\geq$  = 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:** 

Composition .			
Identification	(EC) 1272/2008	Note	%
CAS: 115-10-6	GHS02	[1]	$25 \le x \% < 50$
EC: 204-065-8	Dgr	[7]	
REACH: 01-2119472128-37	Flam. Gas 1, H220		
DIMETHYL ETHER			
EC: 918-668-5	GHS09, GHS07, GHS08, GHS02		10 <= x % < 25
REACH: 01-2119455851-35-xxxx	Dgr		
	Flam. Liq. 3, H226		
HYDROCARBONS, C9, AROMATICS	Asp. Tox. 1, H304		
	STOT SE 3, H335		
	STOT SE 3, H336		
	Aquatic Chronic 2, H411		
	EÛH:066		

REACH: 01-2119539452-40-005	GHS07, GHS08, GHS02		2.5 <= x % < 10
142.1611.01.2119339.132.10.003	Dgr		2.5 × 170 × 10
REACTION MASS OF ETHYLBENZENE	Flam. Liq. 3, H226		
AND XYLENE	Asp. Tox. 1, H304		
THE TILETIE	Acute Tox. 4, H312		
	Skin Irrit. 2, H315		
	Eye Irrit. 2, H319		
	Acute Tox. 4, H332		
	STOT SE 3, H335		
	STOT RE 2, H373		
G. G. 4004 F0 04 0	Aquatic Chronic 3, H412		0.5
CAS: 109159-24-2	GHS07		$2.5 \le x \% < 10$
	Wng		
RESINE POLYURETHANNE	Skin Sens. 1, H317		
	Eye Irrit. 2, H319		
CAS: 108-94-1	GHS07, GHS05	[1]	$2.5 \le x \% < 10$
EC: 203-631-1	Dgr		
REACH: 01-2119453616-35	Acute Tox. 4, H302		
	Acute Tox. 4, H312		
CYCLOHEXANONE	Skin Irrit. 2, H315		
010E011E11 H (011E	Eye Dam. 1, H318		
	Acute Tox. 4, H332		
CAS: 78-93-3	GHS07, GHS02	[1]	2.5 <= x % < 10
EC: 201-159-0		[1]	2.3 <- x /6 < 10
	Dgr		
REACH: 01-2119457290-43-xxxx	Flam. Liq. 2, H225		
	Eye Irrit. 2, H319		
BUTANONE	STOT SE 3, H336		
	EUH:066		
CAS: 1330-20-7	GHS07, GHS08	C	$2.5 \le x \% < 10$
EC: 215-535-7	Dgr	[1]	
REACH: 01-2119488216-32	Asp. Tox. 1, H304		
	Acute Tox. 4, H312		
XYLENE	Skin Irrit. 2, H315		
	Eye Irrit. 2, H319		
	Acute Tox. 4, H332		
	STOT SE 3, H335		
	STOT RE 2, H373		
CAS: 71-36-3	GHS07, GHS05, GHS02	[1]	2.5 <= x % < 10
EC: 200-751-6	Dgr	[1,1	2.5 <- x /0 < 10
EC. 200-731-0			
DUTAN 1 OI	Flam. Liq. 3, H226		
BUTAN-1-OL	Acute Tox. 4, H302		
	Skin Irrit. 2, H315		
	Eye Dam. 1, H318		
	STOT SE 3, H335		
	STOT SE 3, H336		
CAS: 14807-96-6		[1]	$0 \le x \% < 2.5$
EC: 238-877-9			
TALC			
CAS: 78-83-1	GHS07, GHS05, GHS02	[1]	$0 \le x \% < 2.5$
EC: 201-148-0	Dgr	' '	
REACH: 01-2119484609-23	Flam. Liq. 3, H226		
	Skin Irrit. 2, H315		
2-METHYLPROPAN-1-OL	Eye Dam. 1, H318		
ZZIIII ZI KOITIIN I OZ	STOT SE 3, H335		
	STOT SE 3, H336		
INDEX: 601-023-00-4	GHS02, GHS07, GHS08	F11	$0 \le x \% \le 2.5$
		[1]	0 < x % < 2.3
CAS: 100-41-4	Dgr		
EC: 202-849-4	Flam. Liq. 2, H225		
	Acute Tox. 4, H332		
ETHYLBENZENE	STOT RE 2, H373		
	Asp. Tox. 1, H304		

CAS: 1333-86-4		[1]	$0 \le x \% \le 2.5$
EC: 215-609-9			
REACH: 01-2119384822-32			
CARBON, AMORPHOUS			
REACH: 01-2119491304-40	GHS09, GHS07, GHS08	[2]	$0 \le x \% < 2.5$
	Wng		
REACTION PRODUCTS WITH	Skin Sens. 1A, H317		
DECANEDIOIC ACID,	Repr. 2, H361f		
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDINY			
L) ESTER AND DECANEDIOIC ACID,	M Acute = 1		
METHYL	Aquatic Chronic 1, H410		
1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL	M Chronic = 1		
ESTER			
REACH: 01-2120101675-63	GHS07, GHS08		$0 \le x \% < 2.5$
	Wng		
REACTION MASS OF FATTY ACIDS,	Acute Tox. 4, H302		
TALL-OIL, COMPDS. WITH OLEYLAMINE	Skin Irrit. 2, H315		
AND FATTY ACIDS, C18-UNSATD.,	Skin Sens. 1A, H317		
TRIMERS, COMPDS. WITH OLEYLAMINE	STOT RE 2, H373		
	Aquatic Chronic 3, H412		
CAS: 108-65-6	GHS07, GHS02	[1]	$0 \le x \% < 2.5$
EC: 203-603-9	Wng		
REACH: 01-2119475791-29	Flam. Liq. 3, H226		
	STOT SE 3, H336		
2-METHOXY-1-METHYLETHYL ACETATE			

**Specific concentration limits:** 

Specific concentration innes:		
Identification	Specific concentration limits	ATE
CAS: 115-10-6		inhalation: ATE = 163991 mg/l 4h
EC: 204-065-8		(gas)
REACH: 01-2119472128-37		
DIMETHYL ETHER		
EC: 918-668-5		oral: ATE = 3592 mg/kg BW
REACH: 01-2119455851-35-xxxx		
HYDROCARBONS, C9, AROMATICS		
CAS: 78-93-3		inhalation: ATE = 34 mg/l 4h
EC: 201-159-0		(vapours)
REACH: 01-2119457290-43-xxxx		
BUTANONE		
CAS: 71-36-3		dermal: ATE = 3430 mg/kg BW
EC: 200-751-6		
BUTAN-1-OL		
CAS: 78-83-1	Eye Dam. 1: H318 C>= 15%	inhalation: ATE = 24.6 mg/l 4h
EC: 201-148-0	Eye Irrit. 2: H319 10% <= C < 15%	(vapours)
REACH: 01-2119484609-23		
2-METHYLPROPAN-1-OL		
·	I I	1

# Information on ingredients:

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

- [1] Substance for which maximum workplace exposure limits are available.
- [2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.
- [7] 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 splashes or contact with eyes:

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

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

#### 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 aera 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 immediately, showing the label.

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

## 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

No data available.

### 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
- halon
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

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 (CO2)

# 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.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

### 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.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

## 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.

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 eye contact with this mixture at all times.

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 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.

# 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/n	n3 : VME-ppm :	VLE-mg/m3:	VLE-ppm:	Notes:
115-10-6	1920	1000	-	-	-
108-94-1	40.8	10	81.6	20	Peau
78-93-3	600	200	900	300	-
1330-20-7	221	50	442	100	Peau
100-41-4	442	100	884	200	Peau
108-65-6	275	50	550	100	Peau

## - Germany - AGW (BAuA - TRGS 900, 02/2022) :

CAS	VME:	VME:	Excess	Notes
115-10-6		1000 ppm		8(II)
		1900 mg/m <sup>3</sup>		
108-94-1		20 ppm		1(I)
		$80 \text{ mg/m}^3$		
78-93-3		200 ppm		1(I)
		$600 \text{ mg/m}^3$		
1330-20-7		50 ppm		2(II)
		220 mg/m <sup>3</sup>		
71-36-3		100 ppm		1(I)
		$310 \text{ mg/m}^3$		
78-83-1		100 ppm		1(I)
		$310 \text{ mg/m}^3$		
100-41-4		20 ppm		2(II)
		88 mg/m <sup>3</sup>		
108-65-6		50 ppm		1(I)
		270 mg/m <sup>3</sup>		

- 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:
115-10-6	1000	1920	-	-	-	-
108-94-1	10	40.8	20	81.6	-	84
78-93-3	200	600	300	900	*	84
1330-20-7	50	221	100	442	*	4 Bis. 84. *
71-36-3	-	-	50	150	-	84
78-83-1	50	150	-	-	-	84
100-41-4	20	88.4	100	442	*	84
1333-86-4	-	3.5	-	-	-	-
108-65-6	50	275	100	550	-	-

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

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
115-10-6	400 ppm	500 ppm			
	766 mg/m <sup>3</sup>	958 mg/m <sup>3</sup>			
108-94-1	10 ppm	20 ppm		Sk. BMGV	
	$41 \text{ mg/m}^3$	82 mg/m <sup>3</sup>			
78-93-3	200 ppm	300 ppm		Sk. BMGV	
	600 mg/m <sup>3</sup>	899 mg/m <sup>3</sup>			
1330-20-7	50 ppm	100 ppm		Sk. BMGV	
	220 mg/m <sup>3</sup>	441 mg/m <sup>3</sup>			
71-36-3		50 ppm		Sk	
		154 mg/m <sup>3</sup>			
14807-96-6	1 mg/m³				
78-83-1	50 ppm	75 ppm			
	154 mg/m <sup>3</sup>	231 mg/m <sup>3</sup>			
100-41-4	100 ppm	125 ppm		Sk	
	441 mg/m <sup>3</sup>	552 mg/m <sup>3</sup>			
1333-86-4	3.5 mg/m <sup>3</sup>	7 mg/m <sup>3</sup>			
108-65-6	50 ppm	100 ppm		Sk	
	274 mg/m <sup>3</sup>	548 mg/m <sup>3</sup>			

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

REACTION MASS OF FATTY ACIDS, TALL-OIL, COMPDS. WITH OLEYLAMINE AND FATTY ACIDS, C18-UNSATD., TRIMERS, COMPDS. WITH OLEYLAMINE

Final use: Workers.

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 0.43 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects. DNEL: 0.75 mg of substance/m3

Final use: Consumers.

Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 0.11 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 0.21 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term local effects.

DNEL: 0.0113 mg of substance/cm2

Exposure method: Inhalation.

Potential health effects: Long term systemic effects. DNEL: 0.37 mg of substance/m3

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Final use:

Exposure method:

Potential health effects:

DNEL:

Final use:

Exposure method: Potential health effects:

DNEL:

Exposure method:

Potential health effects:

DNEL:

BUTAN-1-OL (CAS: 71-36-3)

Final use:

Exposure method:

Potential health effects:

DNEL:

Final use:

Exposure method:

Potential health effects:

DNEL:

Exposure method:

Potential health effects:

DNEL:

**BUTANONE (CAS: 78-93-3)** 

Final use:

Exposure method:

Potential health effects:

DNEL:

Exposure method:

Potential health effects:

DNEL:

Final use:

Exposure method:

Potential health effects:

DNEL:

Exposure method:

Potential health effects:

Workers.

Inhalation.

Long term systemic effects. 310 mg of substance/m3

Consumers.

Ingestion.

Long term systemic effects.

25 mg/kg body weight/day

Inhalation.

Long term local effects.

55 mg of substance/m3

Workers.

Inhalation.

Long term local effects.

310 mg of substance/m3

Consumers.

Ingestion.

Long term systemic effects.

3.125 mg/kg body weight/day

Inhalation.

Long term local effects.

55 mg of substance/m3

Workers.

Dermal contact. Long term systemic effects.

1161 mg/kg body weight/day

Inhalation.

Long term systemic effects.

600 mg of substance/m3

Consumers.

Ingestion.

Long term systemic effects.

31 mg/kg body weight/day

Dermal contact.

Short term local effects.

DNEL: 412 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 106 mg of substance/m3

REACTION MASS OF ETHYLBENZENE AND XYLENE

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 212 mg/kg body weight/day

Exposure method: Inhalation

Potential health effects: Long term systemic effects.
DNEL: 221 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Short term systemic effects.

DNEL: 442 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term local effects.

DNEL: 221 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Short term local effects.

DNEL: 442 mg of substance/m3

Final use: Consumers. Exposure method: Ingestion.

Potential health effects:

DNEL:

Long term systemic effects.

12.5 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 125 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 65.3 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Short term systemic effects.

DNEL: 260 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term local effects.

DNEL: 65.3 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Short term local effects.

DNEL: 260 mg of substance/m3

HYDROCARBONS, C9, AROMATICS

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: Long term systemic effects.

DNEL: 150 mg of substance/m3

Final use: Consumers. Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 11 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 32 mg of substance/m3

### Predicted no effect concentration (PNEC):

REACTION MASS OF FATTY ACIDS, TALL-OIL, COMPDS. WITH OLEYLAMINE AND FATTY ACIDS, C18-UNSATD.,

TRIMERS, COMPDS. WITH OLEYLAMINE

Environmental compartment: Air.

PNEC: 0.0973 mg/l

Environmental compartment: Fresh water. PNEC: 0.194 mg/l

Environmental compartment: Sea water.
PNEC: 0.0194 mg/l

Environmental compartment: Waste water treatment plant.

PNEC: 100 mg/l

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Environmental compartment: Soil.

PNEC: 0.0699 mg/kg

Environmental compartment: Fresh water.
PNEC: 0.4 mg/l

 $\begin{array}{ll} \mbox{Environmental compartment:} & \mbox{Sea water.} \\ \mbox{PNEC:} & \mbox{0.04 mg/l} \end{array}$ 

Environmental compartment: Intermittent waste water.

PNEC:

Environmental compartment: Fresh water sediment.

PNEC: 1.52 mg/kg

Environmental compartment: Marine sediment. PNEC: 0.152 mg/kg

Environmental compartment: Waste water treatment plant.

PNEC: 10 mg/l

BUTAN-1-OL (CAS: 71-36-3)

Environmental compartment: Soil.

PNEC: 0.015 mg/kg

Environmental compartment: Fresh water. PNEC: 0.082 mg/l

Environmental compartment: Sea water. PNEC: 0.0082 mg/l

Environmental compartment: Intermittent waste water.

PNEC: 2.25 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 0.178 mg/kg

Environmental compartment: Marine sediment. PNEC: 0.0178 mg/kg

Environmental compartment: Waste water treatment plant.

PNEC: 2476 mg/l

**BUTANONE (CAS: 78-93-3)** 

Environmental compartment: Soil.

PNEC: 22.5 mg/kg

Environmental compartment: Fresh water. PNEC: 55.8 mg/l

Environmental compartment: Sea water. PNEC: 55.8 mg/l

Environmental compartment: Intermittent waste water.

PNEC: 55.8 mg/l

Environmental compartment: Waste water treatment plant.

PNEC: 709 mg/l

REACTION MASS OF ETHYLBENZENE AND XYLENE

Environmental compartment: Soil.

PNEC: 2.31 mg/kg

Environmental compartment: Fresh water. PNEC: 0.327 mg/l

Environmental compartment: Sea water. PNEC: 0.327 mg/l

Environmental compartment: Intermittent waste water.

PNEC: 0.327 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 12.46 mg/kg

Environmental compartment: Marine sediment.

PNEC: 12.46 mg/kg

Environmental compartment: Waste water treatment plant.

PNEC: 6.58 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

Before handling, wear safety goggles with protective sides accordance with standard EN166.

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)

#### - 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.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Type of FFP mask:

Wear a disposable half-mask aerosol filter in accordance with standard EN149/A1.

Category:

- FFP1
- FFP3

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387:

- A1 (Brown)
- A3 (Brown)

Particle filter according to standard EN143:

- P1 (White)

- P3 (White)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES** 

9.1. Information on basic physical and chemical properties

Physical state

Physical state: Fluid liquid.

Colour

colour N/A

Odour

Odour threshold: Not stated.

**Melting point** 

Melting point/melting range: Not specified.

Freezing point

Freezing point / Freezing range: Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range: Not specified.

**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 specified.

**Decomposition temperature** 

Decomposition point/decomposition range: Not specified.

pН

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

Kinematic viscosity

Viscosity: Not stated.

**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  $(50^{\circ}\text{C})$ : Not relevant.

Density and/or relative density

Density: 0.929

Relative vapour density

Vapour density: Not stated.

9.2. Other information

VOC(g/l): 495.30

9.2.1. Information with regard to physical hazard classes

No data available.

Aerosols

Chemical combustion heat: Not specified.

Inflammation time :Not specified.Deflagration density :Not specified.Inflammation distance :Not specified.Flame height :Not specified.Flame duration :Not specified.

## 9.2.2. Other safety characteristics

No data available.

#### **SECTION 10: STABILITY AND REACTIVITY**

### 10.1. Reactivity

No data available.

#### 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

No data available.

# 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

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.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

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.

May have irreversible effects on the eyes, such as tissue damage in the eye, or serious physical decay of sight, which is not fully reversible by the end of observation at 21 days.

Serious eye damage is typified by the destruction of cornea, persistent corneal opacity and iritis.

Respiratory tract irritation may occur, together with symptoms such as coughing, choking and breathing difficulties.

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.

May cause an allergic reaction by skin contact.

# 11.1.1. Substances

#### Acute toxicity:

RESINE POLYURETHANNE (CAS: 109159-24-2)

Inhalation route (Dusts/mist): LC50 > 2.676 mg/l

Species: Rat

OECD Guideline 403 (Acute Inhalation Toxicity)

DIMETHYL ETHER (CAS: 115-10-6)

Inhalation route (Gas): LC50 = 163991 ppm

Species: Rat

Duration of exposure: 4 h

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Dermal route : LD50 > 2000 mg/kg

Species: Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Vapours): LC50 = 24.6 mg/l

Duration of exposure: 4 h

CARBON, AMORPHOUS (CAS: 1333-86-4)

Oral route : LD50 > 8000 mg/kg

OECD Guideline 401 (Acute Oral Toxicity)

BUTAN-1-OL (CAS: 71-36-3)

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 = 3430 mg/kg

Species: Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

**BUTANONE (CAS: 78-93-3)** 

Oral route: LD50 > 2193 mg/kg

Species: Rat

OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

 $Dermal \ route: \\ LD50 > 5000 \ mg/kg$ 

Species: Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Vapours): LC50 = 34 mg/l

Species: Rat

Duration of exposure: 4 h

HYDROCARBONS, C9, AROMATICS

Oral route : LD50 = 3592 mg/kg

Species: Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 > 3160 mg/kg

Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/skin irritation:

**BUTANONE (CAS: 78-93-3)** 

Species: Rabbit

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious damage to eyes/eye irritation:

RESINE POLYURETHANNE (CAS: 109159-24-2)

Causes serious eye irritation.

Corneal haze: 1 <= Average score < 2 and effects totally reversible within 21 days of observation

Conjunctival redness:  $2 \le \text{Average score} \le 2.5$  and effects totally reversible within 21 days of observation

Respiratory or skin sensitisation:

BUTAN-1-OL (CAS: 71-36-3)

Guinea Pig Maximisation Test (GMPT): Non-sensitiser.

OECD Guideline 406 (Skin Sensitisation)

**BUTANONE (CAS: 78-93-3)** 

Guinea Pig Maximisation Test (GMPT): Non-sensitiser.

Species: Others

Buehler Test: Non-sensitiser.

Species: Others

OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Mutagenesis (in vivo): Negative.

Species: Mouse

OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

REACTION MASS OF ETHYLBENZENE AND XYLENE

Mutagenesis (in vivo): Negative.

OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

BUTAN-1-OL (CAS: 71-36-3)

No mutagenic effect.

Mutagenesis (in vivo): Negative.

Species : Mouse

OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Mutagenesis (in vitro): Negative.

OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

BUTANONE (CAS: 78-93-3)

No mutagenic effect.

Mutagenesis (in vivo): Negative.

Mutagenesis (in vitro): Negative.

**Carcinogenicity:** 

BUTAN-1-OL (CAS: 71-36-3)

Carcinogenicity Test: Negative.

No carcinogenic effect.

**BUTANONE (CAS: 78-93-3)** 

Carcinogenicity Test: Negative.

No carcinogenic effect.

## Reproductive toxicant:

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

No toxic effect for reproduction

OECD Guideline 414 (Prenatal Developmental Toxicity Study)

#### Specific target organ systemic toxicity - repeated exposure :

BUTANONE (CAS: 78-93-3)

Inhalation route: C = 5041 ppmV/6h/day

Species: Rat

Duration of exposure: 90 days

OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Species: Rat

OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

#### 11.1.2. Mixture

No toxicological data available for the mixture.

# 11.2. Information on other hazards

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

CAS 1333-86-4: IARC Group 2B: The agent is possibly carcinogenic to humans. CAS 100-41-4: IARC Group 2B: The agent is possibly carcinogenic to humans.

CAS 14807-96-6: IARC Group 2B: The agent is possibly carcinogenic to humans.

CAS 1330-20-7: IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans. CAS 108-94-1: IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.

# SECTION 12: ECOLOGICAL INFORMATION

Harmful 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

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Crustacean toxicity: NOEC = 20 mg/l

Species : Daphnia magna Duration of exposure : 21 days

CARBON, AMORPHOUS (CAS: 1333-86-4)

Fish toxicity: EC0 mg/l

Species: Brachydanio rerio

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity: EC50 mg/l

Species : Daphnia magna Duration of exposure : 24 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity: EC50 mg/l

Species: Scenedesmus subspicatus Duration of exposure: 72 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

**BUTANONE (CAS: 78-93-3)** 

Fish toxicity: LC50 = 2993 mg/l

Species: Pimephales promelas Duration of exposure: 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity: EC50 = 308 mg/l

Species : Daphnia magna Duration of exposure : 48 h

Algae toxicity: ECr50 = 1972 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

HYDROCARBONS, C9, AROMATICS

Fish toxicity: LC50 = 9.2 mg/l

Species : Oncorhynchus mykiss Duration of exposure : 96 h

Crustacean toxicity: EC50 = 3.2 mg/l

Species : Daphnia magna Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity: ECr50 = 2.75 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

DIMETHYL ETHER (CAS: 115-10-6)

Fish toxicity : LC50 > 1000 mg/l

Duration of exposure : 96 h

Crustacean toxicity: EC50 > 4400 mg/l

Species : Daphnia magna Duration of exposure : 48 h

BUTAN-1-OL (CAS: 71-36-3)

Fish toxicity: LC50 = 1376 mg/l

Species : Pimephales promelas Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity: EC50 = 1328 mg/l

Species : Daphnia magna Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

NOEC = 4.1 mg/l Species : Daphnia magna Duration of exposure : 21 days

OECD Guideline 211 (Daphnia magna Reproduction Test)

Algae toxicity: ECr50 = 225 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 96 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

#### **12.1.2.** Mixtures

No aquatic toxicity data available for the mixture.

#### 12.2. Persistence and degradability

## 12.2.1. Substances

CARBON, AMORPHOUS (CAS: 1333-86-4)

Biodegradability: Non-rapidly degradable.

2-METHYLPROPAN-1-OL (CAS: 78-83-1)

Biodegradability: no degradability data is available, the substance is considered as not degrading

quickly.

BUTAN-1-OL (CAS: 71-36-3)

Biodegradability: Rapidly degradable.

**BUTANONE (CAS: 78-93-3)** 

Biodegradability: Rapidly degradable.

RESINE POLYURETHANNE (CAS: 109159-24-2)

Biodegradability: no degradability data is available, the substance is considered as not degrading

quickly.

REACTION MASS OF ETHYLBENZENE AND XYLENE

Biodegradability: no degradability data is available, the substance is considered as not degrading

quickly.

HYDROCARBONS, C9, AROMATICS

Biodegradability: Rapidly degradable.

DIMETHYL ETHER (CAS: 115-10-6)

Biodegradability: no degradability data is available, the substance is considered as not degrading

quickly.

## 12.3. Bioaccumulative potential

# 12.3.1. Substances

REACTION MASS OF ETHYLBENZENE AND XYLENE

Bioaccumulation: BCF = 25.9

BUTAN-1-OL (CAS: 71-36-3)

Octanol/water partition coefficient : log Koe = 1

OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

**BUTANONE (CAS: 78-93-3)** 

Octanol/water partition coefficient : log Koe = 0.3

DIMETHYL ETHER (CAS: 115-10-6)

Octanol/water partition coefficient : log Koe = 0.1

# 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 2: 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

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

-

# 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	E0	2	D
							625			

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	E0	- SW1 SW22	SG69
						959			

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

2.1	-	-	Y203	30 kg G	-	A145 A167	E0
						A802	

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. 2022/692 (ATP 18)

#### - 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 2: 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.

# 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.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure .
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	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:

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 CMR: Carcinogenic, mutagenic or reprotoxic.

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: Wassergefahrdungsklasse (Water Hazard Class).

GHS02 : Flame GHS05 : Corrosion

GHS07: Exclamation mark

PBT: Persistent, bioaccumulable and toxic. vPvB: Very persistent, very bioaccumulable. SVHC: Substances of very high concern.