



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 : COLLE REPOSITIONNABLE / 404 / 707
Product code : ODIF-404RT.

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

Spray adhesive.

1.3. Details of the supplier of the safety data sheet

Registered company name : ODIF.
Address : 118, chemin du Sermoraz - BP 413.01704.BEYNOST Cedex.France.
Telephone : +33 (0)4 78 55 07 43. Fax : +33 (0)4 72 25 84 63.
Email: odif@odif.com
<http://www.odif.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).

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

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

2.2. Label elements

Mixture for aerosol application.

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

Hazard pictograms :



GHS02

Signal Word :

DANGER

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements - General :

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

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.
 P273 Avoid release to the environment.
 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 at a disposal facility in accordance with local regulations.
 Other information :

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.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures****Composition :**

Identification	(EC) 1272/2008	Note	%
CAS: 115-10-6 EC: 204-065-8 REACH: 01-2119472128-37 DIMETHYL ETHER	GHS04, GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280	[1]	50 \leq x % < 73
CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32 BUTANE	GHS04, GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280	C [1]	10 \leq x % < 13.5
CAS: 646-06-0 EC: 211-463-5 REACH: 01-2119490744-29 1,3-DIOXOLANE	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1]	2.5 \leq x % < 3.4
CAS: 74-98-6 EC: 200-827-9 REACH: 01-2119486944-21 PROPANE	GHS02 Dgr Flam. Gas 1, H220	[1] [7]	2.5 \leq x % < 3
CAS: 141-78-6 EC: 205-500-4 REACH: 01-2119475103-46 ETHYL ACETATE	GHS07, GHS02 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH:066	[1]	2.5 \leq x % < 3
CAS: 110-82-7 EC: 203-806-2 REACH: 01-2119463273-41 CYCLOHEXANE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[1]	1 \leq x % < 2.4
CAS: 68186-14-1 EC: 269-035-9 METHYL ABIETATE	Aquatic Chronic 3, H412		1 \leq x % < 1.6

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

Information on ingredients :

[7] Propellant gas
 [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 induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

If inhaled, move the patient into the fresh air and keep warm and at rest.
If breathing is irregular or has stopped, proceed with artificial respiration and 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.

In the event of splashes or contact with skin :

Wash the skin thoroughly with soap and water or a recognised cleaner.

In the event of swallowing :

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.

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
- multipurpose ABC powder
- BC powder

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

Due to the toxicity of the gas emitted on thermal decomposition of the products, 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.

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.

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

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 (2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m ³ :	VME-ppm :	VLE-mg/m ³ :	VLE-ppm :	Notes :
115-10-6	1920	1000	-	-	-
141-78-6	734	200	1468	400	-
110-82-7	700	200	-	-	-

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

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8	1000 ppm				
646-06-0	20 ppm				
74-98-6	1000 ppm				
141-78-6	400 ppm				

110-82-7	100 ppm				
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- Germany - AGW (BAuA - TRGS 900, 29/01/2018) :

CAS	VME :	VME :	Excess	Notes
115-10-6		1000 ppm 1900 mg/m ³		8(II)
106-97-8		1000 ppm 2400 mg/m ³		4(II)
646-06-0		100 ppm 310 mg/m ³		2(II)
74-98-6		1000 ppm 1800 mg/m ³		4(II)
141-78-6		200 ppm 730 mg/m ³		2(I)
110-82-7		200 ppm 700 mg/m ³		4(II)

- Belgium (Arrêté du 09/03/2014, 2014) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
115-10-6	1000 ppm 1920 mg/m ³				
106-97-8	1000 ppm				
646-06-0	20 ppm 62 mg/m ³				
74-98-6	1000 ppm				
141-78-6	400 ppm 1461 mg/m ³				
110-82-7	100 ppm 350 mg/m ³				

- France (INRS - ED984 :2016) :

CAS	VME-ppm :	VME-mg/m3 :	VLE-ppm :	VLE-mg/m3 :	Notes :	TMP No :
115-10-6	1000	1920	-	-	-	-
106-97-8	800	1900	-	-	-	-
141-78-6	400	1400	-	-	-	84
110-82-7	200	700	-	-	-	84

- Switzerland (SUVAPRO 2017) :

CAS	VME	VLE	Valeur plafond	Notations
115-10-6	1000 ppm 1910 mg/m ³			
106-97-8	800 ppm 1900 mg/m ³	3200 ppm 7200 mg/m ³		
646-06-0	20 ppm 62 mg/m ³			R SSC
74-98-6	1000 ppm 1800 mg/m ³	4000 ppm 7200 mg/m ³		
141-78-6	400 ppm 1400 mg/m ³	800 ppm 2800 mg/m ³		SSC
110-82-7	200 ppm 700 mg/m ³	800 ppm 2800 mg/m ³		B

- UK / WEL (Workplace exposure limits, EH40/2005, 2011) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
115-10-6	400 ppm 766 mg/m ³	500 ppm 958 mg/m ³			
106-97-8	600 ppm 1450 mg/m ³	750 ppm 1810 mg/m ³		Carc	
141-78-6	200 ppm - mg/m ³	400 ppm - mg/m ³			
110-82-7	100 ppm 350 mg/m ³	300 ppm 1050 mg/m ³			

- USA / AIHA WEEL (American Industrial Hygiene Association, Workplace Environmental Exposure Limit, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
115-10-6	1000 ppm				

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

CYCLOHEXANE (CAS: 110-82-7)

Final use:**Workers.**

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 59.4 mg/kg de poids corporel/jour

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 2016 mg/kg de poids corporel/jour

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 1186 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 700 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 700 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term local effects.
DNEL : 700 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term local effects.
DNEL : 700 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 206 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 412 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term local effects.
DNEL : 206 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 412 mg de substance/m3

ETHYL ACETATE (CAS: 141-78-6)**Final use:****Workers.**

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 63 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 1468 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 1468 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term local effects.
DNEL : 734 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.

DNEL :	734 mg de substance/m3
Final use:	Consumers.
Exposure method:	Ingestion.
Potential health effects:	Long term local effects.
DNEL :	4.5 mg/kg de poids corporel/jour
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	37 mg/kg de poids corporel/jour
Exposure method:	Inhalation.
Potential health effects:	Short term local effects.
DNEL :	734 mg de substance/m3
Exposure method:	Inhalation.
Potential health effects:	Short term systemic effects.
DNEL :	734 mg de substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	367 mg de substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term local effects.
DNEL :	367 mg de substance/m3

1,3-DIOXOLANE (CAS: 646-06-0)

Final use:	Workers.
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	0.04 mg/kg de poids corporel/jour

Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	37.7 mg de substance/m3

Final use:	Consumers.
Exposure method:	Ingestion.
Potential health effects:	Long term systemic effects.
DNEL :	0.63 mg/kg de poids corporel/jour

Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	0.04 mg/kg de poids corporel/jour

Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	45.2 mg de substance/m3

DIMETHYL ETHER (CAS: 115-10-6)

Final use:	Workers.
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	1894 mg de substance/m3

Exposure method:	Inhalation.
Potential health effects:	Short term systemic effects.
DNEL :	471 mg de substance/m3

Predicted no effect concentration (PNEC):

CYCLOHEXANE (CAS: 110-82-7)	
Environmental compartment:	Soil.

PNEC :	2.99 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0.207 mg/l
Environmental compartment:	Sea water.
PNEC :	0.207 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	0.207 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	3.627 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	3.627 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	3.24 mg/l
ETHYL ACETATE (CAS: 141-78-6)	
Environmental compartment:	Soil.
PNEC :	0.22 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0.26 mg/l
Environmental compartment:	Sea water.
PNEC :	0.026 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.34 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	650 mg/l
1,3-DIOXOLANE (CAS: 646-06-0)	
Environmental compartment:	Soil.
PNEC :	2.62 mg/kg
Environmental compartment:	Fresh water.
PNEC :	19.7 mg/l
Environmental compartment:	Sea water.
PNEC :	1.97 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	0.95 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	77.7 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	7.77 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	1 mg/l
DIMETHYL ETHER (CAS: 115-10-6)	
Environmental compartment:	Soil.
PNEC :	0.045 mg/kg
Environmental compartment:	Fresh water.
PNEC :	0.155 mg/l

Environmental compartment:	Sea water.
PNEC :	0.016 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	0.681 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	0.069 mg/kg
Environmental compartment:	Waste water treatment plant.
PNEC :	180 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 in accordance with standard EN166.

- Hand protection

Type of gloves recommended :

- PVA (Polyvinyl alcohol)

- Body protection

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.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Fluid liquid.
	Spray.

Important health, safety and environmental information

pH :	Not relevant.
Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).
Density :	< 1
Water solubility :	Insoluble.
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. Other information

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

Keep away from :

- strong acids
- strong oxidising agents

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 toxicological effects

Splashes in the eyes may cause irritation and reversible damage

11.1.1. Substances

Acute toxicity :

BUTANE (CAS: 106-97-8)

Inhalation route (n/a) :

LC50 = 658 mg/l

Species : Rat

Duration of exposure : 4 h

DIMETHYL ETHER (CAS: 115-10-6)

Inhalation route (n/a) :

LC50 = 312 mg/l

Species : Rat

Duration of exposure : 4 h

METHYL ABIETATE (CAS: 68186-14-1)

Oral route :

2000 < LD50 <= 5000 mg/kg

Species : Rat

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route :

LD50 > 5000 mg/kg

Species : Rabbit

CYCLOHEXANE (CAS: 110-82-7)

Oral route :

LD50 > 5000 mg/kg

Species : Rat

Dermal route :

2,000 < LD50 <= 5000 mg/kg

Species : Rabbit

Inhalation route (n/a) :

LC50 = 32.88 mg/l

Duration of exposure : 4 h

ETHYL ACETATE (CAS: 141-78-6)

Oral route :

LD50 = 4934 mg/kg

Species : Rabbit

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route :

LD50 = 20000 mg/kg

Species : Rabbit

1,3-DIOXOLANE (CAS: 646-06-0)

Oral route :	2000 < LD50 <= 5000 mg/kg Species : Rat
Dermal route :	2,000 < LD50 <= 5000 mg/kg Species : Rabbit
Inhalation route (n/a) :	LC50 = 68.4 mg/l Species : Rat Duration of exposure : 4 h

11.1.2. Mixture

No toxicological data available for the mixture.

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

CYCLOHEXANE (CAS: 110-82-7)

Fish toxicity : LC50 = 4.53 mg/l
Species : Pimephales promelas
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 0.9 mg/l
Factor M = 1
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity : ECr50 = 3.4 mg/l
Species : Selenastrum capricornutum
Duration of exposure : 72 h

ETHYL ACETATE (CAS: 141-78-6)

Fish toxicity : LC50 = 230 mg/l
Species : Pimephales promelas
Duration of exposure : 96 h
NOEC = 9.65 mg/l
Duration of exposure : 96 h
OCDE Ligne directrice 212 (Poisson, essai de toxicité à court terme aux stades de l'embryon et de l'alevin)

Crustacean toxicity : EC50 = 560 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

NOEC = 2.4 mg/l
Species : Daphnia magna
Duration of exposure : 72 h

Algae toxicity : ECr50 = 2500 mg/l
Duration of exposure : 72 h

NOEC > 1000 mg/l

1,3-DIOXOLANE (CAS: 646-06-0)

Fish toxicity : LC50 > 100 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 > 772 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

BUTANE (CAS: 106-97-8)
Fish toxicity : LC50 = 24.11 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 14.22 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

DIMETHYL ETHER (CAS: 115-10-6)
Fish toxicity : LC50 > 4000 mg/l
Species : Poecilia reticulata
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 755.449 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

METHYL ABIETATE (CAS: 68186-14-1)
Biodegradability : Rapidly degradable.

CYCLOHEXANE (CAS: 110-82-7)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

ETHYL ACETATE (CAS: 141-78-6)
Biodegradability : Rapidly degradable.

1,3-DIOXOLANE (CAS: 646-06-0)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

BUTANE (CAS: 106-97-8)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

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

CYCLOHEXANE (CAS: 110-82-7)
Octanol/water partition coefficient : log K_{ow} = 3.44

Bioaccumulation : BCF = 167

ETHYL ACETATE (CAS: 141-78-6)
Octanol/water partition coefficient : log K_{ow} = 0.68

1,3-DIOXOLANE (CAS: 646-06-0)
Octanol/water partition coefficient : log K_{ow} = -0.37

BUTANE (CAS: 106-97-8)
Octanol/water partition coefficient : log K_{ow} < 3.

DIMETHYL ETHER (CAS: 115-10-6)
Octanol/water partition coefficient : log K_{ow} = 0.18

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.

German regulations concerning the classification of hazards for water (WGK, VwVwS vom 27/07/2005, 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 2017 - IMDG 2016 - ICAO/IATA 2017).

14.1. UN 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	190 327 344 625	E0	2	D
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ			
	2	See SP63	-	See SP277	F-D,S-U	63 190 277 327 344 381 959	E0			
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.

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

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. 2017/776 (ATP 10)

- Container information:

No data available.

- Particular provisions :

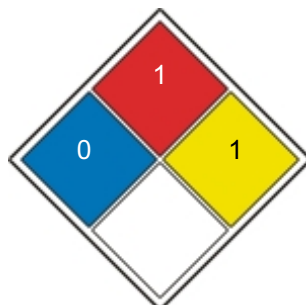
No data available.

- German regulations concerning the classification of hazards for water (WGK, VwVwS vom 27/07/2005, KBws) :

WGK 1 : Slightly hazardous for water.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=0 Inflammability=1 Instability/Reactivity=1 Specific Risk=none



- Swiss ordinance on the incentive tax on volatile organic compounds :

141-78-6	acétate d'éthyle
115-10-6	éther diméthylque (oxyde de diméthyle)
110-82-7	cyclohexane
75-28-5	2-méthylpropane (alcool isobutylique, isobutane)
106-97-8	n-butane
74-98-6	propane

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.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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 :

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

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

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.