

# Safety data sheet

Safe Work Australia - Code of Practice



## Bouin´s fixative

article number: **6482**  
Version: **GHS 1.0 en**

date of compilation: 2018-11-27

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

### 1.1 Product identifier

Identification of the substance	<b>Bouin´s fixative</b>
Article number	6482
Registration number (REACH)	not relevant (mixture)

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

<b>Identified uses:</b>	laboratory and analytical use laboratory chemical
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### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

**e-mail (competent person)** : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification acc. to GHS

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.6	flammable liquid	(Flam. Liq. 3)	H226
3.1O	acute toxicity (oral)	(Acute Tox. 4)	H302
3.1D	acute toxicity (dermal)	(Acute Tox. 5)	H313
3.1I	acute toxicity (inhal.)	(Acute Tox. 5)	H333
3.2	skin corrosion/irritation	(Skin Corr. 1C)	H314
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318
3.4S	skin sensitisation	(Skin Sens. 1)	H317
3.5	germ cell mutagenicity	(Muta. 2)	H341
3.6	carcinogenicity	(Carc. 1B)	H350

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Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	(STOT SE 3)	H335

## 2.2 Label elements

### Labelling GHS

#### Signal word

**Danger**

#### Pictograms

GHS02, GHS05,  
GHS07, GHS08



#### Hazard statements

H226 Flammable liquid and vapour  
H302 Harmful if swallowed  
H313+H333 May be harmful in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage  
H317 May cause an allergic skin reaction  
H335 May cause respiratory irritation  
H341 Suspected of causing genetic defects  
H350 May cause cancer

#### Precautionary statements

##### Precautionary statements - prevention

P201 Obtain special instructions before use.  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P260 Do not breathe dusts or mists.  
P280 Wear eye protection/face protection.

##### Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction.

##### Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.

For professional users only

**Hazardous ingredients for labelling:** Formaldehyde ... %, Picric acid

**Labelling of packages where the contents do not exceed 125 ml**

Signal word: **Danger**

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Symbol(s)



H313+H333 May be harmful in contact with skin or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.

P201 Obtain special instructions before use.  
 P260 Do not breathe dusts or mists.  
 P280 Wear eye protection/face protection.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

contains: Formaldehyde ... %, Picric acid

### 2.3 Other hazards




There is no additional information.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
Formaldehyde ... %	CAS No 50-00-0  EC No 200-001-8  Index No 605-001-00-5  REACH Reg. No 01-2119488953-20-xxxx	5 – < 10	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1B / H350 STOT SE 3 / H335		Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 5 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 5 % ≤ C < 25 % Skin Sens. 1; H317: C ≥ 0.2 % STOT SE 3; H335: C ≥ 5 %
Acetic acid	CAS No 64-19-7  EC No 200-580-7  Index No 607-002-00-6  REACH Reg. No 01-2119475328-30-xxxx	1 – 5	Flam. Liq. 3 / H226 Skin Corr. 1A / H314 Eye Dam. 1 / H318		Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 25 % ≤ C < 90 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %
Picric acid	CAS No 88-89-1  EC No 201-865-9  Index No 609-009-00-X  REACH Reg. No 01-2120763587-40-xxxx	< 1	Expl. 1.1 / H201 Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331		

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### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin reactions, consult a physician.

#### Following eye contact

Irrigate copiously with clean, fresh water, holding the eyelids apart. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Call a doctor if you feel unwell.

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

Allergic reactions, Cough, Vertigo, Vomiting, Nausea, Dizziness, Corrosion, Breathing difficulties, Headache, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings  
water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

The product itself does not burn. Vapours can form explosive mixtures with air.

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### Hazardous combustion products

in case of fire and/or explosion do not breathe fumes

### 5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Do not breathe vapour/spray. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoidance of ignition sources. Provide adequate ventilation.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties.

### 6.3 Methods and material for containment and cleaning up

#### Advices on how to contain a spill

Covering of drains.

#### Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Handle and open container with care. Use extractor hood (laboratory). Avoid exposure. When not in use, keep containers tightly closed. Clear contaminated areas thoroughly.

#### • Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. When using do not smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

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### Incompatible substances or mixtures

Observe hints for combined storage.

### Consideration of other advice

Ground/bond container and receiving equipment.

#### • Ventilation requirements

Use local and general ventilation.

#### • Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Source
AU	formaldehyde	50-00-0		WES	1	1.2	2	2.5	WES
AU	acetic acid	64-19-7		WES	10	25	15	37	WES
AU	picric acid (2,4,6-trinitrophenol)	88-89-1		WES		0.1			WES

#### Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Relevant DNELs/DMELs/PNECs and other threshold levels

##### • relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Formaldehyde ... %	50-00-0	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
Formaldehyde ... %	50-00-0	DNEL	9 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Formaldehyde ... %	50-00-0	DNEL	0.375 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Formaldehyde ... %	50-00-0	DNEL	0.75 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
Formaldehyde ... %	50-00-0	DNEL	240 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Formaldehyde ... %	50-00-0	DNEL	37 µg/cm <sup>2</sup>	human, dermal	worker (industry)	chronic - local effects

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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Acetic acid	64-19-7	DNEL	25 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Acetic acid	64-19-7	DNEL	25 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects

### • relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
Formaldehyde ... %	50-00-0	PNEC	4.44 mg/l	water	intermittent release
Formaldehyde ... %	50-00-0	PNEC	0.44 mg/l	freshwater	short-term (single instance)
Formaldehyde ... %	50-00-0	PNEC	0.44 mg/l	marine water	short-term (single instance)
Formaldehyde ... %	50-00-0	PNEC	0.19 mg/l	sewage treatment plant (STP)	short-term (single instance)
Formaldehyde ... %	50-00-0	PNEC	2.3 mg/kg	freshwater sediment	short-term (single instance)
Formaldehyde ... %	50-00-0	PNEC	2.3 mg/kg	marine sediment	short-term (single instance)
Formaldehyde ... %	50-00-0	PNEC	0.2 mg/kg	soil	short-term (single instance)
Acetic acid	64-19-7	PNEC	3.058 mg/l	freshwater	short-term (single instance)
Acetic acid	64-19-7	PNEC	0.306 mg/l	marine water	short-term (single instance)
Acetic acid	64-19-7	PNEC	85 mg/l	sewage treatment plant (STP)	short-term (single instance)
Acetic acid	64-19-7	PNEC	11.36 mg/kg	freshwater sediment	short-term (single instance)
Acetic acid	64-19-7	PNEC	1.136 mg/kg	marine sediment	short-term (single instance)
Acetic acid	64-19-7	PNEC	0.47 mg/kg	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection. Wear face protection.

#### Skin protection



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### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### • type of material

NBR (Nitrile rubber)

### • material thickness

0,4 mm

### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid (fluid)
Colour	yellow
Odour	like formaldehyde
Odour threshold	No data available

#### Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	not determined
Initial boiling point and boiling range	~ 100 °C
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	~ 1 g/cm <sup>3</sup> at 20 °C



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Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Decomposition temperature	no data available
Viscosity	not determined
Explosive properties	Shall not be classified as explosive
Oxidising properties	none

### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Risk of ignition. Vapours can form explosive mixtures with air.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Acids, Strong oxidiser, Nitrogen oxides (NOx)

### 10.4 Conditions to avoid

Keep away from heat.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

- Acute toxicity of components of the mixture

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Name of substance	CAS No	Exposure route	ATE
Formaldehyde ... %	50-00-0	oral	100 mg/kg
Formaldehyde ... %	50-00-0	dermal	300 mg/kg
Formaldehyde ... %	50-00-0	inhalation: vapour	0.5 mg/l/4h
Acetic acid	64-19-7	oral	3,310 mg/kg
Picric acid	88-89-1	oral	200 mg/kg
Picric acid	88-89-1	dermal	300 mg/kg
Picric acid	88-89-1	inhalation: dust/mist	0.5 mg/l/4h

### Skin corrosion/irritation

Causes severe burns.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

May cause an allergic skin reaction. May cause sensitization by skin contact.

### Summary of evaluation of the CMR properties

#### Germ cell mutagenicity:

Suspected of causing genetic defects

#### Carcinogenicity:

May cause cancer

- **Specific target organ toxicity - single exposure**

May cause respiratory irritation.

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

vomiting, nausea, If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

- **If in eyes**

causes burns, Causes serious eye damage, risk of blindness

- **If inhaled**

irritant effects, cough, vertigo, dizziness, headache, breathing difficulties

- **If on skin**

causes severe burns, causes poorly healing wounds

### Other information

None

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### SECTION 12: Ecological information

#### 12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

##### Aquatic toxicity (acute)

##### Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetic acid	64-19-7	EC50	>1,000 mg/l	aquatic invertebrates	48 h
Acetic acid	64-19-7	ErC50	>1,000 mg/l	algae	72 h

##### Aquatic toxicity (chronic)

##### Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Acetic acid	64-19-7	ErC50	0.08 mg/l	algae	24 h
Acetic acid	64-19-7	EC50	4.51 mg/l	algae	24 h

#### 12.2 Process of degradability

Data are not available.

##### Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
Acetic acid	64-19-7	biotic/abiotic	99 %	30 d

#### 12.3 Bioaccumulative potential

Data are not available.

##### Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Acetic acid	64-19-7	3.16	-0.17 (pH value: 7, 25 °C)	

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Data are not available.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

##### **Sewage disposal-relevant information**

Do not empty into drains.

##### **Sewage disposal-relevant information**

Do not empty into drains.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

- |      |   |  |
|------|---|--|
| 14.1 | UN number   | (not subject to transport regulations)                                       |
| 14.2 | UN proper shipping name   | not relevant   |
| 14.3 | Transport hazard class(es)  | not relevant   |
|      | Class   | -  |
| 14.4 | Packing group   | not relevant   |
| 14.5 | Environmental hazards   | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | <b>Special precautions for user</b>   |  |
|      |   | There is no additional information.  |
| 14.7 | <b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b>             |  |
|      |   | The cargo is not intended to be carried in bulk.                             |
| 14.8 | <b>Information for each of the UN Model Regulations</b>                               |  |
|      | • <b>Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)</b> |  |
|      |   | Not subject to ADR, RID and ADN.   |
|      | • <b>International Maritime Dangerous Goods Code (IMDG)</b>                           |  |
|      |   | Not subject to IMDG.   |
|      | • <b>International Civil Aviation Organization (ICAO-IATA/DGR)</b>                    |  |
|      |   | Not subject to ICAO-IATA.  |

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### SECTION 15: Regulatory information

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

##### National inventories

Country	National inventories	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

##### Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

#### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

##### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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Abbr.	Descriptions of used abbreviations
ATE	Acute Toxicity Estimate
BCF	bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Expl.	explosive material
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Muta.	germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
Skin Sens.	skin sensitisation
STEL	short-term exposure limit

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Abbr.	Descriptions of used abbreviations
STOT SE	specific target organ toxicity - single exposure
TWA	time-weighted average
Unst. Expl.	unstable explosive material
vPvB	very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne conatminants

### Key literature references and sources for data

- UN Recommendations on the Transport of Dangerous Good
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H201	explosive; mass explosion hazard
H226	flammable liquid and vapour
H301	toxic if swallowed
H302	harmful if swallowed
H311	toxic in contact with skin
H313	may be harmful in contact with skin
H314	causes severe skin burns and eye damage
H317	may cause an allergic skin reaction
H318	causes serious eye damage
H330	fatal if inhaled
H331	toxic if inhaled
H333	may be harmful if inhaled
H335	may cause respiratory irritation
H341	suspected of causing genetic defects
H350	may cause cancer

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.