

## Safety Data Sheet

according to UK REACH Regulation

### ROSSMANN's Fixative

Revision date: 09.04.2024

Product code: 14767.xxxxx

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

### 1.1. Product identifier

ROSSMANN's Fixative

UFI: PUV9-91AF-X008-1HDS

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

#### Use of the substance/mixture

Use as laboratory reagent.

#### Uses advised against

Any non-intended use.

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

Company name: MORPHISTO GmbH  
Street: Schumannstr. 142/144  
Place: D-63069 Offenbach  
Telephone: +49 (0) 69 / 400 3019-60      Telefax: +49 (0) 69 / 400 3019-64  
E-mail: info@morphisto.de  
Contact person: Morphisto GmbH  
E-mail: gefahrstoffmanagement@morphisto.de  
Internet: http://www.morphisto.de

### 1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Flam. Liq. 2; H225  
Acute Tox. 4; H302  
Acute Tox. 4; H332  
Eye Irrit. 2; H319  
Skin Sens. 1; H317  
Muta. 2; H341  
Carc. 1B; H350

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

#### Hazard components for labelling

picric acid  
formaldehyde%  
methanol

Signal word: Danger

#### Pictograms:



#### Hazard statements

H225      Highly flammable liquid and vapour.  
H302+H332      Harmful if swallowed or if inhaled.  
H317      May cause an allergic skin reaction.

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H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.

#### Precautionary statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.

#### Special labelling of certain mixtures

Restricted to professional users.

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

Signal word: Danger

Pictograms:



#### Hazard statements

H317-H341-H350

#### Precautionary statements

P201-P280-P308+P313

#### 2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
64-17-5	Ethanol			75 - < 80 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
88-89-1	picric acid			5 - < 10 %
	201-865-9	609-009-00-X		
	Expl. 1.1, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3; H201 H331 H311 H301			
50-00-0	formaldehyde%			1 - < 5 %
	200-001-8	605-001-00-5	01-2119488953-20	
	Carc. 1B, Muta. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1; H350 H341 H331 H311 H301 H314 H317			
67-56-1	methanol			1 - < 5 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
78-93-3	butanone			< 1 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	Ethanol	75 - < 80 %
	inhalation: LC50 = 124,7 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg Eye Irrit. 2; H319: >= 50 - 100		
88-89-1	201-865-9	picric acid	5 - < 10 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: LC50 = 0,51 mg/l (dusts or mists); dermal: LD50 = 300,1 mg/kg; oral: LD50 = 200 mg/kg		
50-00-0	200-001-8	formaldehyde%	1 - < 5 %
	inhalation: LC50 = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = 292 mg/kg; oral: LD50 = 100 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 5 - < 25 Eye Irrit. 2; H319: >= 5 - < 25 Skin Sens. 1; H317: >= 0,2 - 100 STOT SE 3; H335: >= 5 - 100		
67-56-1	200-659-6	methanol	1 - < 5 %
	inhalation: LC50 = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = 300 mg/kg; oral: LD50 = 100 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10		
78-93-3	201-159-0	butanone	< 1 %
	dermal: LD50 = >2000 mg/kg; oral: LD50 = 2054 mg/kg		

**Further Information**

This product contains no substances of very high concern (SVHC) (&gt;0,1%) which are included in the Candidate List according to Article 59 of REACH.

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**

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**General information**

Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of accident by inhalation: remove casualty to fresh air and keep at rest. If unconscious but breathing normally, place in recovery position and seek medical advice. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin irritation, seek medical treatment.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**After ingestion**

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Let water be drunken in little sips (dilution effect). Seek medical advice.

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

Acute effects: Mucous membrane irritation after eye contact or inhalation.

Delayed effects: Impairment of inhibitory functions of the central nervous system, skin redness, nausea after ingestion of large amounts.

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

Treat symptomatically.

Percutaneously absorbed and inhaled substance causes next to irritation of affected mucous membranes only an indicated impairment of the inhibitory functions of the central nervous system, clinically recognizable as the beginning of a euphoric stage. At the same time face and skin redness is caused by dilation of peripheral blood vessels in the body.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Highly flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Formaldehyde

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of fire and/or explosion do not breathe fumes.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

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**General advice**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety. Ventilate affected area. Do not allow to dry. Risk of explosion in case of drying up.

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

**6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**6.3. Methods and material for containment and cleaning up****For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Provide adequate ventilation.

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. (See section 8.)

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Always close containers tightly after the removal of product. Wash contaminated clothing prior to re-use. Street clothing should be stored separately from work clothing.

**Further information on handling**

Flammable vapours can accumulate in head space of closed systems.

Conditions to avoid: Generation/formation of aerosols

Always remove adhering product residues from lids and closures before closing the product.

General protection and hygiene measures: refer to section 8

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Unsuitable materials for Container: metal. Storage: Just as long as necessary.

**Hints on joint storage**

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Do not store together with:

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Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances or mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

#### Further information on storage conditions

Recommended storage temperature: 15-25 °C

Protect against: UV-radiation/sunlight. heat. Cold.

#### 7.3. Specific end use(s)

See section 1.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
50-00-0	Formaldehyde	2	2.5		TWA (8 h)	WEL
		2	2.5		STEL (15 min)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
88-89-1	Picric acid	-	0.1		TWA (8 h)	WEL
		-	0.3		STEL (15 min)	WEL

##### Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

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**DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
64-17-5	Ethanol		
Worker DNEL, acute	inhalation	local	1900 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	343 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	950 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	local	950 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	114 mg/m <sup>3</sup>
Consumer DNEL, long-term	oral	systemic	87 mg/kg bw/day
50-00-0	formaldehyde%		
Worker DNEL, acute	inhalation	systemic	1 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	240 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	0,5 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	0,375 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	0,75 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	local	0,037 mg/cm <sup>2</sup>
67-56-1	methanol		
Worker DNEL, acute	inhalation	local	260 mg/m <sup>3</sup>
Worker DNEL, acute	dermal	systemic	40 mg/kg bw/day
Worker DNEL, acute	inhalation	systemic	260 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	260 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	40 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	260 mg/m <sup>3</sup>
78-93-3	butanone		
Worker DNEL, long-term	inhalation	systemic	600 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	1161 mg/kg bw/day

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
64-17-5	Ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Marine water (intermittent releases)		2,75 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		0,72 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
50-00-0	formaldehyde%	
Freshwater		0,44 mg/l
Freshwater (intermittent releases)		4,44 mg/l
Marine water		0,44 mg/l
Freshwater sediment		2,3 mg/kg
Marine sediment		2,3 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,19 mg/l
Soil		0,2 mg/kg
67-56-1	methanol	
Freshwater		20,8 mg/l
Marine water		2,08 mg/l
Marine water (intermittent releases)		1540 mg/l
Freshwater sediment		77 mg/kg
Marine sediment		7,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		3,18 mg/kg
78-93-3	butanone	
Freshwater		55,8 mg/l
Freshwater (intermittent releases)		55,8 mg/l
Marine water		55,8 mg/l
Freshwater sediment		284,7 mg/kg
Marine sediment		284,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		709 mg/l
Soil		22,5 mg/kg

**8.2. Exposure controls**




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**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Process within closed systems.

Use as laboratory reagent: Use extractor hood (laboratory).

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: goggles. Tightly sealed safety glasses. EN 166

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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. Tested protective gloves are to be worn:

Suitable material:

Butyl rubber. (0,7 mm, Breakthrough time  $\geq$ 480 min, penetration time (maximum wearing period): 160 min):

NBR (Nitrile rubber). (0,4 mm, Breakthrough time  $\geq$ 120 min, penetration time (maximum wearing period): 40 min)

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

**Skin protection**

Protective clothing. (fire retardant.)

Suitable protective clothing: Lab apron.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. Respiratory protection necessary at: exceeding exposure limit values. aerosol or mist generation. Insufficient ventilation.

Suitable respiratory protective equipment:

Combination filtering device (EN 14387) Type : AB-P3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Details on the requirements for use and maximum concentrations can be found in the "Rules for the use of respiratory protective devices" (BGR 190).

**Thermal hazards**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid	
Colour:	yellow	
Odour:	characteristic/Alcohol	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not determined
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined

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Flash point:	20 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure: (at 20 °C)	58 hPa
Density (at 20 °C):	0,86 g/cm <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	not applicable

**9.2. Other information****Information with regard to physical hazard classes****Explosive properties**

The product is not: Explosive. Explosive when dry.

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

**Sustaining combustion:**

No data available

**Self-ignition temperature****Gas:**

not determined

**Oxidizing properties**

none

**Other safety characteristics****Evaporation rate:**

not determined

**Solvent separation test:**

not determined

**Solvent content:**

not determined

**Solid content:**

not determined

**Sublimation point:**

not determined

**Softening point:**

not determined

**Pour point:**

not determined

**Viscosity / dynamic:**

not determined

**Flow time:**

not determined

**Further Information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No information available.

**10.2. Chemical stability**

Risk of explosion in case of drying up.

**10.3. Possibility of hazardous reactions**

Reacts with : Reducing agent Oxidizing agents. Aluminium. Ammonia. Base. Heavy metal salts. fluorine. potassium.

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Keep away from heat. In case of warming: Explosion hazard Ignition hazard. Explosion hazard Ignition hazard. Do not allow to dry. Risk of explosion in case of drying up.

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#### **10.5. Incompatible materials**

Materials to avoid: Reducing agent Oxidizing agents. Aluminium. Ammonia. Base. Heavy metal salts. fluorine. potassium. Substances which in contact with water, emit flammable gases. Organic peroxides. Oxidizing substances. Alkali metals.

#### **10.6. Hazardous decomposition products**

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).  
Formaldehyde

### **SECTION 11: Toxicological information**

#### **11.1. Information on hazard classes as defined in GB CLP Regulation**

##### **Acute toxicity**

Harmful if swallowed.  
Harmful if inhaled.

##### **ATEmix calculated**

ATE (oral) 998,5 mg/kg; ATE (dermal) 2119 mg/kg; ATE (inhalation vapour) 21,38 mg/l; ATE (inhalation dust/mist) 3,604 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	Ethanol				
	oral	LD50 mg/kg	>5000	Rat	ECHA Dossier
	dermal	LD50 mg/kg	>2000	Rabbit	ECHA Dossier
	inhalation (4 h) vapour	LC50 mg/l	124,7	Rat	ECHA Dossier
88-89-1	picric acid				
	oral	LD50 mg/kg	200	Rat	RTECS
	dermal	LD50 mg/kg	300,1		
	inhalation vapour	ATE	3 mg/l		
	inhalation (4 h) dust/mist	LC50	0,51 mg/l		
50-00-0	formaldehyde%				
	oral	LD50 mg/kg	100	Rat	GESTIS
	dermal	LD50 mg/kg	292	Rabbit	GESTIS
	inhalation (4 h) vapour	LC50	3 mg/l	Rat	suppliers SDS.
	inhalation dust/mist	ATE	0,5 mg/l		
67-56-1	methanol				
	oral	LD50 mg/kg	100	Rat	suppliers SDS.
	dermal	LD50 mg/kg	300	Rabbit	suppliers SDS.
	inhalation (4 h) vapour	LC50	3 mg/l	Rat	suppliers SDS.
	inhalation dust/mist	ATE	0,5 mg/l		
78-93-3	butanone				
	oral	LD50 mg/kg	2054	Ratte	SDB Lieferant
	dermal	LD50 mg/kg	>2000	Rabbit	ECHA Dossier

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

May cause an allergic skin reaction. (formaldehyde%)

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing genetic defects. (formaldehyde%)

May cause cancer. (formaldehyde%)

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

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#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

This product does not contain any substance that has endocrine disrupting properties in humans as no ingredient meets the criteria.

##### Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture! Depending on the ingested quantity the following symptoms can be induced: a reduction of inhibitions, euphoria but also dysphoria, aggressiveness, impaired motoric skills, impaired responsiveness, blurred vision and fatigue.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
64-17-5	Ethanol					
	Acute fish toxicity	LC50 14200 mg/l	96 h	Pimephales promelas (fathead minnow)	ECHA Dossier	
	Acute algae toxicity	ErC50 275 mg/l	72 h	Chlorella vulgaris	ECHA Dossier	
	Acute crustacea toxicity	EC50 5012 mg/l	48 h	Ceriodaphnia dubia (water flea)	ECHA Dossier	
	Crustacea toxicity	NOEC 9,6 mg/l	9 d	Daphnia magna	ECHA Dossier	
50-00-0	formaldehyde%					
	Acute fish toxicity	LC50 24,1 mg/l	96 h	Pimephales promelas	ECHA Dossier	
	Acute algae toxicity	ErC50 4,89 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier	
	Acute crustacea toxicity	EC50 5,8 mg/l	48 h	Daphnia pulex (water flea)	ECHA Dossier	
67-56-1	methanol					
	Acute fish toxicity	LC50 15400 mg/l	96 h	Lepomis macrochirus	ECHA Dossier	
	Acute algae toxicity	ErC50 22000 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA Dossier	
	Acute crustacea toxicity	EC50 >1000 mg/l	48 h	Daphnia magna	ECHA Dossier	OECD 202
78-93-3	butanone					
	Acute fish toxicity	LC50 2993 mg/l	96 h	Pimephales promelas	ECHA Dossier	OECD 203
	Acute algae toxicity	ErC50 1972 mg/l	72 h	Pseudokirchnerella subcapitata	ECHA Dossier	OECD 201
	Acute crustacea toxicity	EC50 308 mg/l	48 h	Daphnia magna	ECHA Dossier	OECD 202

#### 12.2. Persistence and degradability

The product has not been tested.

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CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
64-17-5	Ethanol				
	other guideline		84%	20	ECHA Dossier
	Biodegradable.				
50-00-0	formaldehyde%				
	OECD Guideline 301 C		91 %	14	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)				
	OECD Guideline 301 D		90	28	ECHA Dossier
	Product is biodegradable.				
67-56-1	methanol				
	other guideline		96%	20	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)				
78-93-3	butanone				
			98%	28	ECHA Dossier
	Readily biodegradable (according to OECD criteria).				

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
64-17-5	Ethanol	-0,31
50-00-0	formaldehyde%	0,35
67-56-1	methanol	-0,77
78-93-3	butanone	0,3

**BCF**

CAS No	Chemical name	BCF	Species	Source
67-56-1	methanol	<10		

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

The product has not been tested.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal.

Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

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Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**List of Wastes Code - used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

<b><u>14.1. UN number or ID number:</u></b>	UN 1170
<b><u>14.2. UN proper shipping name:</u></b>	ETHANOL SOLUTION
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3



Classification code:	F1
Special Provisions:	144 601
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b><u>14.1. UN number or ID number:</u></b>	UN 1170
<b><u>14.2. UN proper shipping name:</u></b>	ETHANOL SOLUTION
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3



Classification code:	F1
Special Provisions:	144 601
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b><u>14.1. UN number or ID number:</u></b>	UN 1170
<b><u>14.2. UN proper shipping name:</u></b>	ETHANOL SOLUTION

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**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Special Provisions: 144  
Limited quantity: 1 L  
Excepted quantity: E2  
EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1170  
**14.2. UN proper shipping name:** ETHANOL SOLUTION  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Special Provisions: A3 A58 A180  
Limited quantity Passenger: 1 L  
Passenger LQ: Y341  
Excepted quantity: E2  
IATA-packing instructions - Passenger: 353  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 364  
IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid. Refer to section 6-8

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**Additional information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water



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Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

#### Additional information

The product is subject to the Chemicals Prohibition Ordinance (ChemVerbotsV). Observe the requirements and restrictions for handling and dispensing in Section 3 of the ChemVerbotsV, among others.

#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

Ethanol

formaldehyde%

methanol

butanone

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s):

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Rev. 1.00; 22.03.2015, Initial release

Rev. 1.01; 26.08.2015, Documentation of changes: section: 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

Rev 2,0; 13.02.2017, Changes in section: 1-16

Rev. 3,0; 09.04.2024; general adjustment(s)

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**Abbreviations and acronyms**

Expl: Explosives  
Flam. Liq: Flammable liquids  
Acute Tox: Acute toxicity  
Skin Corr: Skin corrosion  
Eye Irrit: Eye irritation  
Skin Sens: Skin sensitisation  
Muta: Germ cell mutagenicity  
Carc: Carcinogenicity  
STOT SE: Specific target organ toxicity - single exposure  
ADR: Accord européen sur le transport des marchandises dangereuses par Route  
CAS Chemical Abstracts Service  
DNEL: Derived No Effect Level  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
LOAEL: Lowest observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NOAEL: No observed adverse effect level  
NOAEC: No observed adverse effect level  
NTP: National Toxicology Program  
N/A: not applicable  
OSHA: Occupational Safety and Health Administration  
PNEC: predicted no effect concentration  
PBT: Persistent bioaccumulative toxic  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
SARA: Superfund Amendments and Reauthorization Act  
SVHC: substance of very high concern  
TRGS Technische Regeln fuerGefahrstoffe  
TSCA: Toxic Substances Control Act  
VOC: Volatile Organic Compounds  
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe  
WGK: Wassergefaehrdungsklasse  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
EC/EEC: European Community/European Economic Community  
EU: European Union  
CAS: Chemical Abstracts Service  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%

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ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 M-factor: Multiplying factor  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route  
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Regulations concerning the international carriage of dangerous goods by rail  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation  
 intérieures)  
 EmS: Emergency Schedules  
 MFAG: Medical First Aid Guide  
 IATA: International Air Transport Association  
 DGR: Dangerous Goods Regulations  
 ICAO: International Civil Aviation Organization  
 TI: Technical Instructions  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 VOC: volatile organic compound  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety  
 assessment, chapter R.20 (Table of terms and abbreviations).

#### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350	Calculation method

#### Relevant H and EUH statements (number and full text)

H201	Explosive; mass explosion hazard.
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
EUH066	Repeated exposure may cause skin dryness or cracking.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. Classification according EC regulation 1272/2008 (CLP): -

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Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

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.

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*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*