

**Safety Data Sheet**

according to UK REACH Regulation

**Fixing solution according to STIEVE**

Revision date: 16.10.2023

Product code: 10418.xxxxx

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

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UFI: CFUW-30J0-W000-7V46

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

Use as laboratory reagent.

The product is intended for research, analysis and scientific education.

**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**

Acute Tox. 3; H301  
Skin Corr. 1B; H314  
Eye Dam. 1; H318  
Skin Sens. 1; H317  
Muta. 2; H341  
Carc. 1B; H350  
Repr. 2; H361f  
STOT SE 3; H335  
STOT RE 2; H373  
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

formaldehyde%  
Mercury(II) chloride  
Acetic acid%  
methanol

**Signal word:** Danger

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**Pictograms:**



**Hazard statements**

H301	Toxic if swallowed.
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.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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.
P310	Immediately call a POISON CENTER/doctor.
P391	Collect spillage.

**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**

H301-H314-H317-H341-H350-H361f

**Precautionary statements**

P201-P260-P280-P303+P361+P353-P305+P351+P338-P310

**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)			
50-00-0	formaldehyde%			5 - < 10 %
	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			
7487-94-7	Mercury(II) chloride			1 - < 5 %
	231-299-8	080-010-00-X		
	Muta. 2, Repr. 2, Acute Tox. 2, Skin Corr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H341 H361f H300 H314 H372 H400 H410			
64-19-7	Acetic acid%			1 - < 5 %
	200-580-7	607-002-00-6	01-2119475328-30	
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			
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			

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		
50-00-0	200-001-8	formaldehyde%	5 - < 10 %
	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		
7487-94-7	231-299-8	Mercury(II) chloride	1 - < 5 %
	dermal: LD50 = >41 mg/kg; oral: LD50 = >1 mg/kg		
64-19-7	200-580-7	Acetic acid%	1 - < 5 %
	inhalation: LC50 = >40 mg/l (vapours); oral: LD50 = 3530 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25		
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		

**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**
**General information**

Remove affected person from the danger area and lay down. First aider: Pay attention to self-protection! Remove contaminated, saturated clothing immediately. Remove casualty to fresh air and keep warm and at rest. To supervise the blood circulation. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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**After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice. Medical treatment necessary. Where appropriate artificial ventilation. No direct artificial respiration to be given by first aider. Call a physician 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. Call a physician immediately.

**After contact with eyes**

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. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

**After ingestion**

Observe risk of aspiration if vomiting occurs. Adverse human health effects and symptoms: Gastric perforation. Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Do NOT induce vomiting. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Call a physician immediately.

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

refer to section 2 and 11.

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

First Aid, decontamination, treatment of symptoms.

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

Co-ordinate fire-fighting measures to the fire surroundings. alcohol resistant foam, Dry extinguishing powder

**Unsuitable extinguishing media**

Full water jet

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

Non-flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>). Formaldehyde, mercury (Hg). Metal oxide smoke, toxic, Hydrogen chloride (HCl), Chlorine (Cl<sub>2</sub>). Do not inhale explosion and combustion gases.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. Do not inhale explosion and combustion gases. Fight fire remotely due to the risk of explosion.

**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. Co-ordinate fire-fighting measures to the fire surroundings.

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

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. 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.

**For non-emergency personnel**

Provide fresh air. Clear danger zone. Follow emergency plan. Consult an expert. Do not inhale explosion and combustion gases. Wear a self-contained breathing apparatus and chemical protective clothing.

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**For emergency responders**

Move undamaged containers from immediate hazard area if it can be done safely. Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Stop leak if safe to do so.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided. 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 containment**

Cover drains. Collect, embank and pump out. Observe possible material restrictions (section 10). Contain leaks or spills within cabinets with removable trays.

**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. Ventilate affected area. 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. Technical ventilation of workplace. Use extractor hood (laboratory). Wear suitable protective clothing. ( See section 8. ) Avoid exposure - obtain special instructions before use.

Avoid contact with skin, eyes and clothes. Always close containers tightly after the removal of product. The usual precautions for handling chemicals should be considered.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**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. Wash contaminated clothing prior to re-use. Used working clothes should not be worn outside the work area. Street clothing should be stored separately from work clothing.

**Further information on handling**

General protection and hygiene measures: See 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/Store only in original container. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

**Hints on joint storage**

Do not store together with: food and feed. pharmaceuticals. Infectious substances. Radioactive substances. Explosive substances. Oxidizing substances. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Pyrophoric solids. Substances which in contact with water form flammable gases. Ammonium nitrate and preparations containing ammonium nitrate. Gas. Flammable liquids. Self-heating substances and mixtures. Combustible toxic substances. Non-combustible toxic substances.

**Further information on storage conditions**

Ensure adequate ventilation of the storage area. Store small packages in a suitable, robust cabinet. Make sure

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spills can be contained, e.g. in sump pallets or kerbed areas. Protect against: UV-radiation/sunlight. Heat.

Frost. Humidity.

Recommended storage temperature: 15-25°C.

**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
64-19-7	Acetic acid	10	25		TWA (8 h)	WEL
		20	50		STEL (15 min)	WEL
50-00-0	Formaldehyde	2	2.5		TWA (8 h)	WEL
		2	2.5		STEL (15 min)	WEL
-	Mercury: divalent inorganic mercury compounds including mercuric oxide and mercuric chloride (measured as mercury)	-	0.02		TWA (8 h)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
7439-97-6	Mercury	mercury (creatinine)	20 µmol/mol	urine	Random

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**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
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>
64-19-7	Acetic acid%			
Worker DNEL, long-term		inhalation	local	25 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	25 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	25 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	local	25 mg/m <sup>3</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>

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
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
64-19-7	Acetic acid%	
Freshwater		3,058 mg/l
Freshwater (intermittent releases)		30,58 mg/l
Marine water		0,306 mg/l
Freshwater sediment		11,36 mg/kg
Marine sediment		1,136 mg/kg
Micro-organisms in sewage treatment plants (STP)		85 mg/l
Soil		0,47 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

**8.2. Exposure controls**

**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Technical measures and the application of suitable work processes have priority over personal protection equipment. Technical ventilation of workplace. Process within closed systems. Use extractor hood (laboratory). Provide washing facilities at the workplace, provide an eye shower or eyewash bottle and mark them.

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

Suitable eye protection: goggles. Tightly sealed safety glasses. Eye glasses with side protection. Face protection shield. 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



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recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Pull-over gloves of rubber.

Suitable material: penetration time (maximum wearing period):  $\geq 8$ h

FKM (fluororubber). (0,4 mm)

Butyl rubber. (0,5 mm)

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.

**Skin protection**

Use of protective clothing. Suitable protective clothing: Chemical protection 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:

Insufficient ventilation.

insufficient absorption.

exceeding exposure limit values

Release of: product

Suitable respiratory protective equipment: Combination filtering device, gas filtering equipment (EN 141).AX;

Identification color: brown. or Self-contained respirator (breathing apparatus) 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. The wearing time limitations according to GefStoffV in conjunction with the rules for the use of respiratory protective devices (BGR 190) must be observed.

**Thermal hazards**

Wear fire resistant or flame retardant clothing.

**Environmental exposure controls**

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided.

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

Physical state:	liquid	
Colour:	colourless	
Odour:	pungent, stinging	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		ca. 60 °C
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not determined
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		2-3
Viscosity / kinematic:		not determined
Water solubility: (at 20 °C)		partially miscible
Solubility in other solvents		not determined
Partition coefficient n-octanol/water:		not determined
Vapour pressure: (at 20 °C)		23 hPa

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Vapour pressure: (at 50 °C)	123 hPa
Density (at 20 °C):	1,01 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.

## Oxidizing properties

The product is not: oxidising.

**Other safety characteristics**

Evaporation rate:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Viscosity / dynamic:	not determined
Flow time:	not determined

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

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. Explosive in a vapour/gaseous state with air.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature. Stabilizer: Methanol.

**10.3. Possibility of hazardous reactions**

Violent reaction with: Acids. Nitrogen oxides (NO<sub>x</sub>). Oxidizing agents. Performic acid, perchloric acid. polymerization initiators. Alkali metals. The reaction partners generally known for water.

**10.4. Conditions to avoid**

Keep away from heat.

**10.5. Incompatible materials**

Materials to avoid: Nitrogen oxides (NO<sub>x</sub>). Nitric acid. Hydrogenium peroxide. Aniline. Performic acid, perchloric acid, Reducing agent, strong, Oxidizing agents, strong. Phenol, Strong acid, Strong alkali. different metals, different alloys, different plastics, magnesium, zinc alloys.

**10.6. Hazardous decomposition products**

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>). Formaldehyde, mercury (Hg). Metal oxide smoke, toxic, Hydrogen chloride (HCl), Chlorine (Cl<sub>2</sub>).

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Toxic if swallowed.

**ATEmix calculated**

ATE (oral) 105,5 mg/kg; ATE (dermal) 2982 mg/kg; ATE (inhalation vapour) 30,47 mg/l; ATE (inhalation dust/mist) 5,078 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
50-00-0	formaldehyde%				
	oral	LD50 100 mg/kg	Rat	GESTIS	
	dermal	LD50 292 mg/kg	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50 3 mg/l	Rat	suppliers SDS.	
	inhalation dust/mist	ATE 0,5 mg/l			
7487-94-7	Mercury(II) chloride				
	oral	LD50 >1 mg/kg	Rat	RTECS	
	dermal	LD50 >41 mg/kg	Rabbit	RTECS	
64-19-7	Acetic acid%				
	oral	LD50 3530 mg/kg	Rat	GESTIS	
	inhalation (4 h) vapour	LC50 >40 mg/l	Rat	suppliers SDS.	
67-56-1	methanol				
	oral	LD50 100 mg/kg	Rat	suppliers SDS.	
	dermal	LD50 300 mg/kg	Rabbit	suppliers SDS.	
	inhalation (4 h) vapour	LC50 3 mg/l	Rat	suppliers SDS.	
	inhalation dust/mist	ATE 0,5 mg/l			

**Irritation and corrosivity**

Causes severe skin burns and eye damage.  
 Causes serious eye damage.

**Sensitising effects**

May cause an allergic skin reaction. (formaldehyde%)

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

Suspected of causing genetic defects. (formaldehyde%; Mercury(II) chloride)  
 May cause cancer. (formaldehyde%)  
 Suspected of damaging fertility. (Mercury(II) chloride)

**STOT-single exposure**

May cause respiratory irritation. (formaldehyde%)

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. (Mercury(II) chloride)

**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 a substance that has endocrine disrupting properties with respect to humans as no components 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!

**SECTION 12: Ecological information**
**12.1. Toxicity**

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Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
50-00-0	formaldehyde%					
	Acute fish toxicity	LC50 mg/l	24,1	96 h	Pimephales promelas	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	4,89	72 h	Desmodesmus subspicatus	ECHA Dossier
	Acute crustacea toxicity	EC50	5,8 mg/l	48 h	Daphnia pulex (water flea)	ECHA Dossier
7487-94-7	Mercury(II) chloride					
	Acute fish toxicity	LC50 mg/l	0,214	96 h	Labeo rohita	GESTI
	Acute algae toxicity	ErC50	0,1 mg/l	72 h		GESTIS
	Acute crustacea toxicity	EC50 mg/l	0,01	48 h	Penaeus penicillatus	GESTIS
64-19-7	Acetic acid%					
	Acute fish toxicity	LC50 mg/l	>300	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	>300	72 h	Skeletonema costatum	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	>300	48 h	Daphnia magna	ECHA Dossier
67-56-1	methanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna	ECHA Dossier OECD 202

**12.2. Persistence and degradability**

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
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.			
64-19-7	Acetic acid%			
	Other guideline	95%	5	suppliers SDS.
	Easily biodegradable (concerning to the criteria of the OECD)			
67-56-1	methanol			
	other guideline	96%	20	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)			

**12.3. Bioaccumulative potential**

The product has not been tested.

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**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
50-00-0	formaldehyde%	0,35
7487-94-7	Mercury(II) chloride	0,22
64-19-7	Acetic acid%	-0,17
67-56-1	methanol	-0,77

**BCF**

CAS No	Chemical name	BCF	Species	Source
64-19-7	Acetic acid%	3,16		
67-56-1	methanol	<10		

**12.4. Mobility in soil**

No information available.

**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**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Do not allow uncontrolled discharge of product into the environment.

**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. Hazardous waste according to Directive 2008/98/EC (waste framework directive). Consult the local waste disposal expert about waste disposal. 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. 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. Non-contaminated packages may be recycled.

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**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (formaldehyde ... %, Mercury(II) chloride)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8+6.1



Classification code: CT1  
 Special Provisions: 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 86  
 Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (formaldehyde ... %, Mercury(II) chloride)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8+6.1



Classification code: CT1  
 Special Provisions: 274 802  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (formaldehyde...%, mercury(II) chloride)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8+6.1



Special Provisions: 223 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-A, S-B

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

**14.1. UN number or ID number:** UN 2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (formaldehyde...%, mercury(II) chloride)

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**14.3. Transport hazard class(es):**

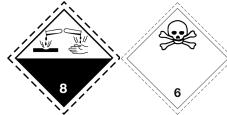
8

**14.4. Packing group:**

III

Hazard label:

8+6.1



Special Provisions:

A3 A4 A803

Limited quantity Passenger:

1 L

Passenger LQ:

Y841

Excepted quantity:

E1

IATA-packing instructions - Passenger:

852

IATA-max. quantity - Passenger:

5 L

IATA-packing instructions - Cargo:

856

IATA-max. quantity - Cargo:

60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:

Yes



Danger releasing substance:

Mercury(II) chloride

**14.6. Special precautions for user**

Warning: Acute Toxicity. strongly corrosive. 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

E2 Hazardous to the Aquatic Environment

2012/18/EU (SEVESO III):

**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

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:

formaldehyde%

Acetic acid%

methanol

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#### SECTION 16: Other information

##### Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Rev. 1.0; 16.08.2016, Initial release

Rev. 1.1; 22.10.2020, Revision Indication of changes: Classification of the substance or mixture, Changes in chapter:1 -16

Rev. 1.2; 18.11.2020, Indication of changes: Changes in chapter: 15.1; Adding the UFI code.

Rev. 1,3; 22.07.2021, Control, Changes in chapter: 1-16.

Rev. 2,0; 16.10.2023; general adjustment(s)



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**Abbreviations and acronyms**

Flam. Liq: Flammable liquids  
Acute Tox: Acute toxicity  
Skin Corr: Skin corrosion  
Eye Dam: Eye damage  
Skin Sens: Skin sensitisation  
Muta: Germ cell mutagenicity  
Carc: Carcinogenicity  
Repr: Reproductive toxicity  
STOT SE: Specific target organ toxicity - single exposure  
STOT RE: Specific target organ toxicity - repeated exposure  
Aquatic Acute: Acute aquatic hazard  
Aquatic Chronic: Chronic aquatic hazard  
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: Wassergefaehrungsklasse  
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  
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  
 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  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
 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
Acute Tox. 3; H301	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350	Calculation method
Repr. 2; H361f	Calculation method
STOT SE 3; H335	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 2; H411	Calculation method

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of

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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): -

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.)*