



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Buffer solution pH 3

Revision: 15.12.2023

Product code: AC18.07133

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## SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Carc. 1B; H350

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard components for labelling**

formaldehyde

**Signal word:** Danger**Pictograms:****Hazard statements**

H350

May cause cancer.

EUH208

Contains formaldehyde. May produce an allergic reaction.

**Precautionary statements**

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P280

Wear protective gloves/protective clothing and eye protection/face protection.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P405

Store locked up.

P501

Dispose of contents/container to hazardous or special waste collection point.

**Special labelling**

Restricted to professional users.

**2.3. Other hazards**

No data available

## SECTION 3: Composition/information on ingredients

**3.2. Mixtures****Chemical characterization**

Mixtures in aqueous solution

**Relevant ingredients**

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
50-00-0	formaldehyde			< 1 %
	200-001-8	605-001-00-5	01-2119488953-20	
	Carc. 1B, Muta. 2, Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A, STOT SE 3; H350 H341 H330 H311 H301 H314 H318 H317 H335 EUH071			

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

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**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	< 1 %
		inhalation: LC50 = < 463 mg/l (vapours); inhalation: ATE 100 ppm (gases); dermal: ATE = 300 mg/kg; oral: ATE 500 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 5 - < 25 Eye Irrit. 2; H319: >= 5 - < 25 STOT SE 3; H335: >= 5 - 100	

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

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

No data available

**After inhalation**

Provide fresh air.

Call a physician immediately.

**After contact with skin**

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

**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.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Allergic reactions

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

No data available

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

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

**Unsuitable extinguishing media**

no restriction

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

Non-combustible liquids

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures**

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**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Do not breathe vapour/aerosol.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**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**

Handle and open container with care.

Keep container tightly closed.

Do not breathe vapour/aerosol.

Avoid contact with skin, eyes and clothes.

Use extractor hood (laboratory).

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Wash contaminated clothing prior to re-use.

Do not breathe vapour/aerosol.

Avoid contact with skin, eyes and clothes.

**Further information on handling**

Wash contaminated clothing before reuse.

Wash hands before breaks and after work.

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

Keep container tightly closed.

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

Store in a dry place.

Store in a place accessible by authorized persons only.

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

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
50-00-0	Formaldehyde	0.3	0.37		TWA (8 h)	
		0.6	0.738		STEL (15 min)	

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
50-00-0	formaldehyde			
	Worker DNEL, long-term	inhalation	systemic	9 mg/m <sup>3</sup>
	Worker DNEL, long-term	inhalation	local	0,375 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	240 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	3,2 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	local	0,1 mg/m <sup>3</sup>
	Consumer DNEL, long-term	dermal	systemic	102 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	4,1 mg/kg bw/day
	Worker DNEL, acute	inhalation	local	0,75 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Value
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

**8.2. Exposure controls**

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**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

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

goggles

**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.

**Skin protection**

Wear suitable protective clothing.

Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Thermal hazards**

No data available

**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:	clear	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		3
Viscosity / kinematic:		No data available
Water solubility:		No data available
Solubility in other solvents		
No data available		
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		No data available
Dispersion stability:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		No data available
Relative density:		No data available

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Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

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

Explosive properties	
No data available	
Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

**Other safety characteristics**

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	0%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	No data available

**Further Information**

No data available

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

There are no data available on the mixture itself.

**10.2. Chemical stability**

There are no data available on the mixture itself.

**10.3. Possibility of hazardous reactions**

There are no data available on the mixture itself.

**10.4. Conditions to avoid**

There are no data available on the mixture itself.

**10.5. Incompatible materials**

There are no data available on the mixture itself.

**10.6. Hazardous decomposition products**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

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**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) &gt; 5000 mg/kg; ATE (dermal) &gt; 5000 mg/kg; ATE (inhalation vapour) &gt; 50 mg/l; ATE (inhalation dust/mist) &gt; 12,5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
50-00-0	formaldehyde				
	oral	ATE 500 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation (4 h) vapour	LC50 < 463 mg/l	Rat	Study report (2015)	OECD Guideline 403
	inhalation gas	ATE 100 ppm			

**Irritation and corrosivity**

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

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

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

Contains formaldehyde. May produce an allergic reaction.

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

May cause cancer. (formaldehyde)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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.

**Aspiration hazard**

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

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards****Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information**

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**12.1. Toxicity**

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

CAS No	Chemical name		Dose		[h]   [d]	Species	Source	Method
50-00-0	formaldehyde							
	Acute fish toxicity	LC50 mg/l	27,57	96 h	Ictalurus punctatus	Prog.Fish-Cult. 20(1):8-15 (1958)	acute toxicity test; "static bioassay"	
	Acute algae toxicity	ErC50 mg/l	3,48	72 h	Desmodesmus subspicatus	Ecotoxicol Environ Safety 54: 346-354 (2)	OECD Guideline 201	
	Acute crustacea toxicity	EC50	5,8 mg/l	48 h	Daphnia pulex	Water, Air and Soil Pollution 97, 315-32	OECD Guideline 202	
	Fish toxicity	NOEC mg/l	>= 48	28 d	Oryzias latipes	NTIS (ed.) Compendium of the FY1988 and	OECD Guideline 215	
	Crustacea toxicity	NOEC mg/l	>= 6,4	21 d	Daphnia magna	Study report (2008)	OECD Guideline 211	
	Acute bacteria toxicity	EC50	19 mg/l ( )	3 h	Activated sludge	Chemosphere 14, 1239-1251 (1985)	OECD Guideline 209	

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
50-00-0	formaldehyde	0,35

**BCF**

CAS No	Chemical name	BCF	Species	Source
50-00-0	formaldehyde	< 1	Paralichthys olivaceus and Sebastes schlegeli	Aquaculture 194, 253

**12.4. Mobility in soil**

There are no data available on the mixture itself.

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

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

**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**

There are no data available on the mixture itself.

**Further information**

Do not allow to enter into surface water or drains.

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

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**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.  
Send to a physico-chemical treatment facility under observation of official regulations.  
Do not allow to enter into surface water or drains.

**Contaminated packaging**

Waste codes/waste designations according to EWC/AVV

**SECTION 14: Transport information****Land transport (ADR/RID)**

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

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

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.  
**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.  
**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.  
**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

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

No dangerous good in sense of this transport regulation.

**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 28, Entry 75

**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

**Additional information**

No data available

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**SECTION 16: Other information****Abbreviations and acronyms**

- Acute Tox. 2: Acute toxicity, hazard category 2
- Acute Tox. 3: Acute toxicity, hazard category 3
- Skin Corr. 1B: Skin corrosion, sub-category 1B
- Eye Dam. 1: Serious eye damage, hazard category 1
- Skin Sens. 1A: Skin sensitisation, hazard category 1A
- Muta. 2: Germ cell mutagenicity, hazard category 2
- Carc. 1B: Carcinogenicity, hazard category 1B
- STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Carc. 1B; H350	Calculation method

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

- 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.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- EUH071 Corrosive to the respiratory tract.
- EUH208 Contains formaldehyde. May produce an allergic reaction.

**Further Information**

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. 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. Provide appropriate information, instructions and training to users

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