

Safety Data Sheet

according to Regulation (EC) No 1907/2006

205932 Formaldehyde 36-38% Solution

Revision date: 04.07.2017

Product code: 205932

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

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

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Germ cell mutagenicity: Muta. 2

Carcinogenicity: Carc. 1B

Specific target organ toxicity - single exposure: STOT SE 1

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazard Statements:

Toxic if swallowed.

Toxic in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

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Causes damage to organs.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

formaldehyde ... %
methanol

Signal word: Danger

Pictograms:



Hazard statements

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.
P310 Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			50-60 %
	231-791-2			
50-00-0	formaldehyde ... %			30-40 %
	200-001-8	605-001-00-5		
	Carc. 1B, Muta. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1; H350 H341 H301 H311 H331 H314 H317			
67-56-1	methanol			10-20 %
	200-659-6	603-001-00-X		
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 1, STOT RE 1; H225 H331 H311 H301 H315 H319 H370 H372			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off all contaminated clothing immediately.
Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air. Artificial respiration and/or oxygen may be necessary. Call a physician immediately.

After contact with skin

Wash off immediately with soap and plenty of water. Call a physician immediately.

After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

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

In case of skin contact: May cause thermal burns. Skin sensitisation
If inhaled: Dizziness, Irregular cardiac activity, Unconsciousness
If swallowed: Dizziness, Irregular cardiac activity, Unconsciousness
In case of eye contact: May cause thermal burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Combustible Liquid
Does not sustain combustion.
Water, Carbon dioxide (CO₂), Alcohol-resistant foam Dry powder,

Unsuitable extinguishing media

None known.

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5.2. Special hazards arising from the substance or mixture

Combustible Liquid

Fire may liberate hazardous vapours. Does not sustain combustion.

Highly toxic fumes (Formaldehyde, Carbon monoxide, Carbon dioxide (CO₂))

Keep away from flames and sparks.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Cool closed containers exposed to fire with water spray.

Additional information

None known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

6.2. Environmental precautions

(contamination risk) Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. P381 - Eliminate all ignition sources if safe to do so. Do not inhale fumes. Non-sparking tools should be used. Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Keep away from open flames, hot surfaces and sources of ignition. P376 - Stop leak if safe to do so. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Use with adequate ventilation. Wash thoroughly after handling. General industrial hygiene practice.

Advice on protection against fire and explosion

See also section 5

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container closed when not in use. Keep away from heat. Keep away from flames and sparks. Remove all sources of ignition.

Hints on joint storage

None known.

Further information on storage conditions

no data available

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
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

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Wash hands before breaks and after work. General industrial hygiene practice. Ensure that eye flushing systems and safety showers are located close to the working place. Use only in area provided with appropriate exhaust ventilation. Keep away from heat.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact: Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Skin protection

Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Respiratory protection

Avoid breathing dust or vapour. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	stinging
pH-Value (at 20 °C):	2,8-4

Changes in the physical state

Melting point:	-15 °C
Initial boiling point and boiling range:	96 °C
Sublimation point:	not applicable
Softening point:	not applicable

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Pour point: no data available
Autoignition temperature: no data available
Flash point: 64 °C
Sustaining combustion: No data available

Flammability

Solid: not applicable
Gas: no data available

Explosive properties

no data available

Lower explosion limits: 7 vol. %
Upper explosion limits: 70 vol. %
Ignition temperature: no data available

Auto-ignition temperature

Solid: not applicable
Gas: no data available

Decomposition temperature: no data available

Oxidizing properties

no data available

Vapour pressure: no data available
Vapour pressure: no data available

Density (at 20 °C): 1,08 g/cm³

Bulk density: not applicable

Water solubility:
(at 20 °C) soluble**Solubility in other solvents**

soluble (Alcohol, Acetone)

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

9.2. Other information

Solid content: not applicable

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

Reactivity Hazard: Oxidizing agents, Alkaline earth metals

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

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10.4. Conditions to avoid

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Heating or fire can release toxic gas. Formaldehyde, Carbon dioxide (CO₂), Carbon monoxide

Further information

This information is not available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

Toxic if swallowed, in contact with skin or if inhaled.

LD₅₀/oral/rat = 800 mg/kg

ATEmix calculated

ATE (oral) 200,0 mg/kg; ATE (dermal) 600,0 mg/kg; ATE (inhalation vapour) 7,33 mg/l; ATE (inhalation aerosol) 1,000 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
50-00-0	formaldehyde ... %				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation (4 h) vapour	LC ₅₀ 250 mg/l	rat		
	inhalation aerosol	ATE 0,5 mg/l			
67-56-1	methanol				
	oral	LD ₅₀ 5628 mg/kg	rat		
	dermal	LD ₅₀ 17100 mg/kg	rabbits		
	inhalation (4 h) vapour	LC ₅₀ 10 mg/l	rat		
	inhalation aerosol	ATE 0,5 mg/l			

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes skin and eye burns.

Sensitising effects

May cause an allergic skin reaction. (formaldehyde ... %)

May cause sensitisation by skin contact.

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.

Human carcinogen.

May cause cancer.

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STOT-single exposure

May cause respiratory irritation. (formaldehyde ... %)

Causes damage to organs. (methanol)

The substance or mixture is not classified as specific target organ toxicant, single exposure.

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (methanol)

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration hazard

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

No aspiration toxicity classification

Specific effects in experiment on an animal

No toxicology information is available.

Practical experience

Observations relevant to classification

None known.

Other observations

None known.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1. Toxicity

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
67-56-1	methanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus (Bluegill sunfish)	
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata (green algae)	
	Acute crustacea toxicity	EC50 mg/l	24500	48 h	Crustaceans	

12.2. Persistence and degradability

no data available

12.3. Bioaccumulative potential

no data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-56-1	methanol	-0,77

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

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12.6. Other adverse effects

No known effect.

Further information

no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from 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

Waste disposal number of 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

Waste disposal number of contaminated packaging

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

Contaminated packaging

Dispose of as unused product.

The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 2209
14.2. UN proper shipping name:	Formaldehyde solution
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C9
Special Provisions:	533
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Other applicable information (land transport)

-

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

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14.1. UN number: UN 2209
14.2. UN proper shipping name: FORMALDEHYDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



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

Other applicable information (marine transport)

-

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2209
14.2. UN proper shipping name: FORMALDEHYDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



Special Provisions: 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

Other applicable information (air transport)

-

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

not applicable

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

not applicable

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P
These transport data apply to the entire pack

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: formaldehyde ... %

Entry 69: methanol

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils 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 contaminating class (D):

2 - clearly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

Revision: 04.07.2017

Safety datasheet sections which have been updated: 2, 11

Revision: 08.12.2016

Safety datasheet sections which have been updated: 2

Revision: 09.05.2016

Safety datasheet sections which have been updated: 2,4,11,

Revision: 19.03.2015

Safety datasheet sections which have been updated: 3

Revision: 24.07.2014

Safety datasheet sections which have been updated: 1-16

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

Classification	Classification procedure
Acute Tox. 3; H301	Calculation method
Acute Tox. 3; H311	Calculation method
Acute Tox. 3; H331	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
STOT SE 1; H370	Calculation method
STOT SE 3; H335	Calculation method
STOT RE 1; H372	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

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H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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