

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.07.2023

Version number 2 (replaces version 1)

Revision: 13.07.2023

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

1.1 Product identifier

Trade name: Methanol for UHPLC-MS



Article number: 45635

CAS Number:

67-56-1

EC number:

200-659-6

Index number:

603-001-00-X

Registration number 01-2119433307-44

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

Product category PC21 Laboratory chemicals

Process category PROC15 Use as laboratory reagent

Application of the substance / the mixture: Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

Information department: Security Department Tel.: +49 6221 13840-35

1.4 Emergency telephone number:

Medical emergency information in case of poisoning:

Poison Information Centre Mainz - Phone: +49 (0) 6131 19240

(Advisory service in German or English language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08

STOT SE 1 H370 Causes damage to organs.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

The substance is classified and labelled according to the GB CLP regulation.

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- **Hazard pictograms:** GHS02, GHS06, GHS08
- **Signal word:** Danger
- **Hazard statements:**
 - H225 Highly flammable liquid and vapour.
 - H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
 - H370 Causes damage to organs.
- **Precautionary statements**
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P264 Wash thoroughly after handling.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms** GHS02, GHS06, GHS08
- **Signal word** Danger
- **Hazard statements**
 - H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
 - H370 Causes damage to organs.
- **Precautionary statements**
 - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment:**
- **PBT:** PBT - Assessment not available.
- **vPvB:** vPvB - Assessment not available.
- **Determination of endocrine-disrupting properties** No further relevant information available.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description:**
 - 67-56-1 methanol
- **Identification number(s):**
- **EC number:** 200-659-6
- **Index number:** 603-001-00-X
- **Specific concentration limits**
 - STOT SE 1; H370: $C \geq 10 \%$
 - STOT SE 2; H371: $3 \% \leq C < 10 \%$
- **Description:**

· **Empirical formula:**67-56-1 | methanol | $C H_4 O$ · **MW:** 32.00

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
 - Remove contaminated clothing.
 - Remove breathing apparatus only after contaminated clothing have been completely removed.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
 - Remove contaminated clothing immediately.
 - Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.

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- **After eye contact:**
Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:** Rinse out mouth. Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Nausea
Dizziness
Headache
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**
Vapours may form flammable and explosive mixtures with air.
Vapours are heavier than air and spread over the floor. Accumulation in low areas is possible.
In case of fire, the following can be formed, but not limited to:
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid contact with eyes and skin.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
Avoid contact with eyes and skin.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Keep away from heat sources.
- **Information about storage in one common storage facility:** Do not store together with oxidizing materials.
- **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.

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Store containers tightly closed and dry.

· **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**· **Components with limit values that require monitoring at the workplace:****67-56-1 methanol (80-100%)**

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

· **DNELs**Worker: Long-term/short-term. systemic/acute effects, inhalation: 130 mg/m³.Workers: Acute local effects, inhalation: 260 mg/m³.

Workers: Long-term/ short-term. systemic/ acute effects, dermal: 20 mg/kg (bw/day)

· **PNECs**

PNEC freshwater: 20.8 mg/l

PNEC freshwater sediment: 77 mg/kg

PNEC seawater: 2.08 mg/l

PNEC soil: 100 mg/kg

PNEC sewage treatment plant: 100 mg/l

· **Additional information:** The lists that were valid during the creation were used as basis.· **8.2 Exposure controls**· **Appropriate engineering controls:** No further data; see section 7.· **Individual protection measures, such as personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Short term filter device:

Filter ABEK-P2

· **Hand protection:**

Neoprene gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Chloroprene rubber, CR

· **Eye/face protection:** Tightly sealed goggles.

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· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information:**

· Physical state:	Fluid
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	-98 °C
· Boiling point or initial boiling point and boiling range:	65 °C
· Flammability:	Not applicable.
· Lower and upper explosion limit:	
· Lower:	5.5 Vol %
· Upper:	44 Vol %
· Flash point:	9.7 °C
· Auto-ignition temperature:	455 °C
· Decomposition temperature:	Not determined.
· Viscosity:	
· Kinematic viscosity:	Not determined.
· Dynamic viscosity at 20 °C:	0.59 mPas
· Solubility:	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value):	Not determined.
· Vapour pressure at 20 °C:	128 hPa
· Vapour pressure at 50 °C:	552 hPa
· Density and/or relative density:	
· Density at 20 °C:	0.79 g/cm ³
· Relative density:	Not determined.

· **9.2 Other information** Further physico-chemical data are not available.

· **Appearance:**

· **Form:** Liquid

· **Important information on protection of health and environment, and on safety:**

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Molecular weight** 32 g/mol

SECTION 10: Stability and reactivity

· **10.1 Reactivity:** No further relevant information available.

· **10.2 Chemical stability:**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions:**

Explosion hazard in case of contact with:
strong oxidising agents

· **10.4 Conditions to avoid:** High temperatures

· **10.5 Incompatible materials:**

Avoid contact with:
Oxidising agents

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· **10.6 Hazardous decomposition products:** In case of fire: see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Toxic if swallowed, in contact with skin or if inhaled.

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	>1,187 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
Inhalative	LC50/4h	83.9 mg/l (rat)
	LC50/96h	10,800 mg/l (trout)

- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** 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:** Causes damage to organs.
- **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.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** Easily biodegradable
- **12.3 Bioaccumulative potential:** Does not accumulate in organisms
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Dispose of in accordance with official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**
Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

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· Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

UN1230

· 14.2 UN proper shipping name

· ADR

1230 METHANOL

· IMDG, IATA

METHANOL

· 14.3 Transport hazard class(es)

· ADR



· Class:

3 Flammable liquids.

· Label:

3+6.1

· IMDG



· Class

3 Flammable liquids.

· Label

3/6.1

· IATA



· Class

3 Flammable liquids.

· Label

3 (6.1)

· 14.4 Packing group

· ADR, IMDG, IATA

II

· 14.5 Environmental hazards

· Marine pollutant:

No

· 14.6 Special precautions for user

Warning: Flammable liquids.

· Hazard identification number (Kemler code):

336

· EMS Number:

F-E,S-D

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

IL

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

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· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** Substance is listed.
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 500 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 5,000 t
 - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40, 69, 75
 - **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
 - **REGULATION (EU) 2019/1148**
 - **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
 - **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
 - **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
 - **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
 - **National regulations:**
 - **Technical instructions (air):**
- | Class | Share in % |
|-------|------------|
| I | 80-100 |
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Security Department
- **Contact:** +49 6221 13840-35
- **Date of previous version:** 19.10.2017
- **Version number of previous version:** 1
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (UK REACH)
vPvB: very persistent, very bioaccumulative substance (UK REACH)
UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
GB CLP: Regulation on classification, labelling and packaging of substances and mixtures
bw: body weight
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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*IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**DNEL: Derived No-Effect Level (UK REACH)**PNEC: Predicted No-Effect Concentration (UK REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids – Category 2**Acute Tox. 3: Acute toxicity – Category 3**STOT SE 1: Specific target organ toxicity (single exposure) – Category 1*

GB