

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/13/2023

Reviewed on 07/13/2023

1 Identification

- **Product identifier**
- **Trade name:** Methanol
- **Article number:** 45631
- **CAS Number:**
67-56-1
- **EC number:**
200-659-6
- **Index number:**
603-001-00-X
- **Application of the substance / the mixture:** Laboratory chemicals
- **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
- **Emergency telephone number:**
Medical emergency information in case of poisoning
Poison Information Center Mainz-Tel: +49 (0) 6131 19240
(Advice in German and English)

SERVA
■ serving scientists ■

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS06

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Dermal 3

H311 Toxic in contact with skin.

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.



GHS08

Specific Target Organ Toxicity - Single Exposure 1 H370 Causes damage to organs.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:** GHS02, GHS06, GHS08
- **Signal word:** Danger
- **Hazard statements:**
Highly flammable liquid and vapor.
Toxic if swallowed, in contact with skin or if inhaled.

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Causes damage to organs.

· **Precautionary statements**

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

Wash thoroughly after handling.

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

If swallowed: Immediately call a poison center/doctor.

If on skin: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *1

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment:**

· **PBT:** PBT - Assessment not available.

· **vPvB:** vPvB - Assessment not available.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description:**

67-56-1 methanol

· **Identification number(s):**

· **EC number:** 200-659-6

· **Index number:** 603-001-00-X

· **Description:**

· **Empirical formula:**

67-56-1	methanol	C ₁ H ₄ O
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· **MW:** 32.00

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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.

· **After eye contact:**

Rinse opened eye for several minutes with running water. Remove existing contact lenses, if possible, and continue rinsing. Consult an ophthalmologist immediately.

· **After swallowing:** Rinse out mouth. Call a doctor immediately.

· **Most important symptoms and effects, both acute and delayed**

Nausea

Dizziness

Headache

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Vapors may form flammable and explosive mixtures with air.
Flammable substance, vapors are heavier than air and spread on the ground. Vapors may accumulate in low-lying areas.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Do not inhale vapors.
Avoid contact with eyes and skin.
Keep away from ignition sources
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 530 ppm
- **PAC-2:** 2,100 ppm
- **PAC-3:** 7200* ppm
- **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.

7 Handling and storage

- **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.
- **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.
Store container tightly closed and dry.

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

8 Exposure controls/personal protection

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

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV	Short-term value: 250 ppm
	Long-term value: 200 ppm
	Skin; BEI

· **Ingredients with biological limit values:****67-56-1 methanol (80-100%)**

BEI	15 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Methanol (background, nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Additional information about design of technical systems:** No further data; see section 7.· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

Short term filter device:

Filter ABEK-P2

· **Protection of hands:**

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 protection:** Tightly sealed goggles

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· **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information:

· Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.
· Melting point/Melting range:	-98 °C (-144.4 °F)
· Boiling point/Boiling range:	65 °C (149 °F)
· Flammability (solid, gaseous):	Not applicable.
· Explosion limits:	
· Lower:	5.5 Vol %
· Upper:	44 Vol %
· Flash point:	9.7 °C (49.5 °F)
· Auto igniting:	455 °C (851 °F)
· Decomposition temperature:	Not determined.
· Viscosity:	
· Kinematic viscosity:	Not determined.
· Dynamic viscosity at 20 °C (68 °F):	0.59 mPas
· Solubility in / Miscibility with:	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Vapor pressure at 50 °C (122 °F):	552 hPa (414 mm Hg)
· Density at 20 °C (68 °F):	0.79 g/cm ³ (6.59255 lbs/gal)
· Relative density:	Not determined.

· **Other information** Further physicochemical data are not available.

· **Appearance:**

· **Form:** Liquid

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

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Molecular weight** 32 g/mol

10 Stability and reactivity

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

· **Chemical stability:**

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

· **Possibility of hazardous reactions:**

Explosion hazard in case of contact with:
strong oxidizing agents

· **Conditions to avoid:** High temperatures

· **Incompatible materials:**

Avoid contact with:

Oxidizing agents

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

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11 Toxicological information

- **Information on toxicological effects**
- **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)

- **Specific target organ toxicity - single exposure:** Causes damage to organs.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** Easily biodegradable
- **Bioaccumulative potential:** Does not accumulate in organisms
- **Mobility in soil:** No further relevant information available.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **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 (Assessment by list): slightly hazardous for water

13 Disposal considerations

- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1230
- **UN proper shipping name**
- **DOT** Methanol
- **ADR** 1230 METHANOL

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· **IMDG, IATA** **METHANOL**· **Transport hazard class(es)**· **DOT**

· **Class** 3 Flammable liquids
 · **Label** 3, 6.1

· **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)

· **Packing group**· **DOT, ADR, IMDG, IATA** II· **Environmental hazards**· **Marine pollutant:** No· **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.· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**Not applicable.· **Transport/Additional information:**· **ADR**

· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

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- | | |
|--|---|
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <ul style="list-style-type: none"> IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <ul style="list-style-type: none"> UN 1230 METHANOL, 3 (6.1), II |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is listed.
- **Proposition 65** Substance is not listed.
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS02, GHS06, GHS08
- **Signal word** Danger
- **Hazard statements**
Highly flammable liquid and vapor.
Toxic if swallowed, in contact with skin or if inhaled.
Causes damage to organs.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
If on skin: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 preparation / last revision** 07/13/2023
- **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 (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

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*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)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**BEI: Biological Exposure Limit**Flammable Liquids 2: Flammable liquids – Category 2**Acute Toxicity - Oral 3: Acute toxicity – Category 3**Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1*

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