

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 24.06.2022

Version: 3 (replaces version 2)

Revision: 24.06.2022

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

- **1.1 Product identifier**
- **Trade name:** **Methanol Standard 1**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture calibration standard**
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Alivion AG  
Holzhäusernstrasse 18  
CHG-6313 Menzingen  
Tel. + 41 41 511 46 71  
www.alivion.ch  
E-Mail: info@alivion.ch
- **Further information obtainable from:** E-Mail: info@alivion.ch
- **1.4 Emergency telephone number:**  
Tox Info Suisse: 145/24 h  
Emergency phone number: + 41 44 151 51 51 (24h/7d)

### SECTION 2: Hazards identification

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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Warning
- **Hazard statements**  
H226 Flammable liquid and vapour.
- **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P280	Wear protective gloves / eye protection / face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **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:**  
Foam  
Carbon dioxide  
Fire-extinguishing powder  
Sand
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon Monoxide and Carbondioxide  
Nitrogen oxides (NOx)  
Sulphur dioxide (SO2)  
sodium oxides.
- **5.3 Advice for firefighters**
- **Protective equipment:** In case of fire, wear self-contained respiratory protective device.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Cool endangered receptacles with water spray.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Beware of vapors accumulating to form explosive concentrations.  
Ensure adequate ventilation  
Keep away from ignition sources.  
Do not breathe vapors / mist / gas  
Wear protective clothing.  
In case of fire.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable receptacles.  
Pick up mechanically.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Covering the drains.
- **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**  
Do not inhale mist or vapors.  
Avoid contact with eyes and skin.  
Keep receptacles tightly sealed.  
Carry out work in open spaces.  
Avoid generation of vapours/aerosols.  
Wash contaminated clothing.

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Preventive skin protection.

Wash hands after work and breaks.

Do not eat, drink or smoke at work

**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep away from open flames and hot surfaces.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:**

Store in dry conditions.

Protect from heat and direct sunlight.

Keep container tightly sealed.

Keep under lock and key or only for experts or their agents.

**Recommended storage temperature:** See product label.

**Storage class:** 3 CH/TRGS510 Flammable liquids

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

### SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

**64-17-5 ethanol**

MAK (Switzerland)	Short-term value: 1920 mg/m <sup>3</sup> , 1000 ppm Long-term value: 960 mg/m <sup>3</sup> , 500 ppm SSc;
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**67-56-1 methanol**

MAK (Switzerland)	Short-term value: 520 mg/m <sup>3</sup> , 400 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm H B SSc;
IOELV (EU)	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin

**78-93-3 butanone**

MAK (Switzerland)	Short-term value: 590 mg/m <sup>3</sup> , 200 ppm Long-term value: 590 mg/m <sup>3</sup> , 200 ppm H B SSc;
IOELV (EU)	Short-term value: 900 mg/m <sup>3</sup> , 300 ppm Long-term value: 600 mg/m <sup>3</sup> , 200 ppm

**Ingredients with biological limit values:**

**67-56-1 methanol**

BAT (Switzerland)	30 mg/l Untersuchungsmaterial/Specimen: Urin/Urine Probennahmezeitpunkt/Time of sampling: Expositionsende bzw. Schichtende, bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Biol. Parameter/Biological parameter: Methanol
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**78-93-3 butanone**

BAT (Switzerland)	2 mg/l Untersuchungsmaterial/Specimen: Urin/Urine Probennahmezeitpunkt/Time of sampling: Expositionsende bzw. Schichtende Biol. Parameter/Biological parameter: 2-Butanon (MEK)
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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** Use appropriate local exhaust ventilation.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

· **Respiratory protection:**

Respiratory protection according to EN 141

When risk assessment indicates the need for air-purifying respiratory protection, a respirator with a full face mask (according to EN136) with filter type ABEK must be worn.

· **Hand protection**

Chemical resistant gloves (EN 374)



Protective 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**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Recommended thickness of the material:  $\geq$  BR 0.7 FRM 0.7 mm

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).

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

· **Eye/face protection**



Tightly sealed goggles

according to EN 166.

· **Body protection:**

Solvent resistant protective clothing

Flame retardant antistatic protective clothing.

### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Orange

· **Odour:**

Alcohol-like

· **Odour threshold:**

Not determined.

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· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	>78 °C (DIN 51751)
· <b>Flammability</b>	Flammable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	3.5 Vol % (64-17-5 ethanol)
· <b>Upper:</b>	15 Vol % (64-17-5 ethanol)
· <b>Flash point:</b>	29 °C (DIN 51755)
· <b>Ignition temperature:</b>	425 °C (DIN 51794, 64-17-5 ethanol)
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Soluble.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	59 hPa (64-17-5 ethanol)
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.94 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	33.9 %
· <b>Water:</b>	60.2 %
· <b>VOC (EC)</b>	33.93 %
· <b>VOC (CH)</b>	33.93 %
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.

· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Flammable liquid and vapour.
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void

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· **Desensitised explosives**

Void

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Vapour/air mixtures are explosive and flammable if heated to a high degree.
- **10.2 Chemical stability**  
The product is chemically stable under normal ambient conditions (room temperature).
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidizing agents, Gum. different plastics. magnesium, zinc alloys.
- **10.6 Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur dioxide  
In the event of a fire, hazardous decomposition products may be formed.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008** Heat, flames and sparks.
- **Acute toxicity** Based on available data, the classification criteria are not met.

#### · LD/LC50 values relevant for classification:

##### ATE (Acute Toxicity Estimates)

Oral	LD50	8,230 mg/kg (rat)
Dermal	LD50	24,673 mg/kg (rabbit)
Inhalative	LC50/4 h	255 mg/l (rat)

##### 64-17-5 ethanol

Oral	LD50	10,470 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	51 mg/l (rat)

##### 67-56-1 methanol

Oral	LD50	100.1 mg/kg (rat)
Dermal	LD50	300.1 mg/kg (rabbit)
Inhalative	LC50/4 h	3.1 mg/l (rat)

##### 78-93-3 butanone

Oral	LD50	>2,193 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	34 mg/l (rat)

- **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** 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.

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

78-93-3 butanone

List II

\* **SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:****64-17-5 ethanol**

EC50 4 h	5,800 mg/l (Bakterien)
LC50 (96h)	15,300 mg/l (pimelas promelas)
EC 50 (72 h)	275 mg/l (Chlorella vulgaris)
EC50 48 h	12,340 mg/l (daphnia magna)

**67-56-1 methanol**

EC50 96 h OECD 202	18,260 mg/l (daphnia magna)
LC50 (96h)	15,400 mg/l (Lepomis macrochirus)
ErC50 96 h	22,000 mg/l (Pseudokirchneriella subcapitata Grünalg)

**78-93-3 butanone**

LC50 (96h)	308 mg/l (daphnia magna) 2,993 mg/l (pimelas promelas)
EC50 (16h)	1,150 mg/l (Pseuomonas putida)
EC 50 (72 h)	1,972 mg/l (Pseudokirchneriella subcapitata Grünalg)

· **12.2 Persistence and degradability** Easily biodegradable· **12.3 Bioaccumulative potential** No further relevant information available.· **12.4 Mobility in soil** No further relevant information available.· **12.5 Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.· **12.7 Other adverse effects**· **Additional ecological information:**· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

\* **SECTION 13: Disposal considerations**· **13.1 Waste treatment methods**· **Recommendation**

Hand over to hazardous waste disposers.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

14 06 03*	other solvents and solvent mixtures
15 01 02	plastic packaging

· **DETEC Ordinance on Lists for the Movement of Waste (SR 814.610.1)**

14 06 03 sw special waste other solvents and solvent mixtures

15 01 02: plastic packaging

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN1987
· 14.2 UN proper shipping name · ADR · IMDG · IATA	1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 30 F-E,S-D A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 3, III

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### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to Regulation (EC) No 1272/2008  
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS02

- Signal word **Warning**
- Hazard statements  
H226 Flammable liquid and vapour.
- Precautionary statements
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P240 Ground and bond container and receiving equipment.
  - P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
  - P280 Wear protective gloves / eye protection / face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 69

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

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· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

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· **Regulation Switzerland (CH)**

Majour Accidents Ordinance MAO SR 814.012: threshold quantities 20000 kg

Annex 4 OChim SR 813.11 : No group

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### 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:** product safety department

· **Contact:**

MADER CHEMIE SICHERHEIT

CH-3006 Bern

Hr. Mader

· **Date of previous version:** 23.06.2022

· **Version number of previous version:** 2

· **Abbreviations and acronyms:**

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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)

VOC: Volatile Organic Compounds (USA, EU)

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

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **\* Data compared to the previous version altered.**

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