

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 28.08.2024

Version number 3

Revision: 28.08.2024

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

· 1.1 Product identifier

· **Trade name:** Ethanol denaturated 96 %



· **Article number:** 11096

· **UFI:** 5P80-90HP-P00T-ND6G

· 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:** 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:** Product Safety Department Tel.: +49 6221 13840-35

· 1.4 Emergency telephone number:

Emergency medical information in case of poisoning

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

(Counselling in German and English)

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.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

· 2.2 Label elements

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

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

· **Hazard pictograms:** GHS02, GHS07

· **Signal word:** Danger

· **Hazard statements:**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P243 Take action to prevent static discharges.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment:**
- **PBT:** Concentration of substances classified as PBT: < 0,1%
- **vPvB:** concentration of substances classified as vPvB: < 0,1%

· **Determination of endocrine-disrupting properties**

78-93-3 butanone

List II

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Solution

· **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43	ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	80-100%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	0.5-1.5%
CAS: 78-93-3 EINECS: 201-159-0	butanone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	0.5-1.5%
CAS: 3734-33-6 EINECS: 223-095-2	denatonium benzoate ☠ Acute Tox. 2, H330; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	0.1-0.2%

· **Additional information**

The product does not contain any other substances that have to be declared according to UK REACH (Regulation (EC) No 1907/2006).

For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
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 contact lenses, if possible, and continue rinsing. In case of complaints, consult an ophthalmologist.
- **After swallowing:**
Rinse out mouth immediately. Drink plenty of water and provide fresh air. Call a doctor immediately.
Do not induce vomiting!
- **4.2 Most important symptoms and effects, both acute and delayed** Dizziness
- **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.

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Formation of toxic gases is possible during heating or in case of fire.

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.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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**

Wear protective clothing.

Ensure adequate ventilation

Particular danger of slipping on leaked/spilled product.

· **6.2 Environmental precautions:**

Prevent seepage into sewage system, workpits and cellars.

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.

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:**

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:**

Store only in the original receptacle.

Unsuitable material for receptacle: aluminium.

Store in a cool location.

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

· **Further information about storage conditions:** 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:**

64-17-5 ethanol (80-100%)

WEL Long-term value: 1920 mg/m³, 1000 ppm

67-63-0 propan-2-ol (0.5-1.5%)

WEL Short-term value: 1250 mg/m³, 500 ppm

Long-term value: 999 mg/m³, 400 ppm

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78-93-3 butanone (0.5-1.5%)

WEL Short-term value: 899 mg/m³, 300 ppm
 Long-term value: 600 mg/m³, 200 ppm
 Sk, BMGV

· Ingredients with biological limit values:**78-93-3 butanone (0.5-1.5%)**

BMGV 70 µmol/L
 Medium: urine
 Sampling time: post shift
 Parameter: butan-2-one

· **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.

Store protective clothing separately.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

· **Breathing equipment:**

Short term filter device:

Filter A/P2.

· **Hand protection:**

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.

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:**

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:**

Nitrile rubber, NBR

Chloroprene rubber, CR

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

· **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.

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· Melting point/freezing point:	-114 °C
· Boiling point or initial boiling point and boiling range:	78 °C (64-17-5 ethanol)
· Flammability:	Highly flammable.
· Lower and upper explosion limit:	
· Lower:	3.5 Vol % (64-17-5 ethanol)
· Upper:	15 Vol % (64-17-5 ethanol)
· Flash point:	12 °C (64-17-5 ethanol)
· Auto-ignition temperature:	425 °C (64-17-5 ethanol)
· Decomposition temperature:	No information available
· pH at 20 °C:	7
· Viscosity:	
· Kinematic viscosity:	No information available
· Dynamic viscosity at 20 °C:	1.2 mPas
· Solubility:	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value):	No information available
· Vapour pressure at 20 °C:	59 hPa (64-17-5 ethanol)
· Vapour pressure at 50 °C:	280 hPa
· Density and/or relative density:	
· Density at 20 °C:	0.79 g/cm ³
· Relative density:	No information available
· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· 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	46.1 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:** Vapours may form flammable and explosive mixtures with air.
- **10.4 Conditions to avoid:**
Avoid high temperatures, flames, sparks
static discharge
- **10.5 Incompatible materials:** Avoid contact with oxidising agents.
- **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:** Based on available data, the classification criteria are not met.

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

64-17-5 ethanol

Oral	LD50	10,470 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4h	124.7 mg/l (rat)

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

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- **Serious eye damage/irritation:** Causes serious eye irritation.
- **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.
- **11.2 Information on other hazards:**

· Endocrine disrupting properties:	
78-93-3	butanone

List II

SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:**
 - LC50/96h (Oncorhynchus mykiss): 13000 mg/l
 - LC50/48h (Daphnia magna): 12340 mg/l
 - Toxicity to algae: NOEC (Lemna gibba, OECD 201) = 280 mg/l
- **12.2 Persistence and degradability:**
 - Biodegradability (OECD 301B) for ethanol: 97% in 28d
 - Easily biodegradable
- **12.3 Bioaccumulative potential:** BCF: 0.66 - 3.2 mg/l
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
 - **PBT:** Concentration of substances classified as PBT: < 0,1%
 - **vPvB:** Concentration of substances classified as vPvB: < 0.1%
- **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.

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

SECTION 14: Transport information

- | | |
|---------------------------------------|--|
| · 14.1 UN number or ID number | UN1170 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| · ADR | |
| · IMDG | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |

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· IATA	ETHANOL SOLUTION
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class:	3 Flammable liquids.
· Label:	3
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· 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
· Transport category	2
· 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 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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- **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

· **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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- **National regulations:**

- **Water hazard class:** Water hazard class 1 (Self-assessment): 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.

- **Relevant phrases**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

- **Department issuing SDS:** Product Safety Department

- **Contact:** +49 6221 13840-35

- **Date of previous version:** 28.08.2024

- **Abbreviations and acronyms:**

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

UFI: Unique Formula Identifier

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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*Flam. Liq. 2: Flammable liquids – Category 2**Acute Tox. 4: Acute toxicity – Category 4**Acute Tox. 2: Acute toxicity – Category 2**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

GB