

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 03.05.2018

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

1.1 Product identifier

Trade name: Isoamyl alcohol

Article number: 39557

CAS Number:

123-51-3

EC number:

204-633-5

Index number:

603-006-00-7

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:

Medical Emergency Information in case of poisoning:

Poison Information Center 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. 3 H226 Flammable liquid and vapour.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms GHS02, GHS07

Signal word Warning

Hazard statements

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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· Precautionary statements

- P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P243** Take precautionary measures against static discharge.
- P261** Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· 2.3 Other hazards**· Results of PBT and vPvB assessment**

- PBT:** Not applicable.
- vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

- CAS No. Description:**
123-51-3 3-methylbutan-1-ol
- Identification number(s):**
- EC number:** 204-633-5
- Index number:** 603-006-00-7
- Description:**
- Empirical formula:** C₅ H₁₂ O
- MW:** 88.15

SECTION 4: First aid measures

· 4.1 Description of first aid measures**· General information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation** Supply fresh air and to be sure call for a doctor.
- After skin contact** Immediately wash with water and soap and rinse thoroughly.
- After eye contact** Rinse opened eye for several minutes under running water.
- After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· 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.

· 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 formed, but not limited to:

Carbon monoxide and carbon dioxide

· 5.3 Advice for firefighters

- Protective equipment:** Wear self-contained respiratory protective device.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
Prevent formation of aerosols.
Ensure good ventilation/exhaustion at the workplace.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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:** Do not store together with oxidizing materials.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

· 8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

123-51-3 3-methylbutan-1-ol (80-100%)	
WEL	Short-term value: 458 mg/m ³ , 125 ppm
	Long-term value: 366 mg/m ³ , 100 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls

· 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.

· Breathing equipment:

Short term filter device:
Filter A/P2.

· Protection of hands:

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

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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:**

Nitrile rubber, NBR

Chloroprene rubber, CR

Neoprene gloves

· **Eye 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**

· **Appearance:**

Form: Liquid

Colour: Colourless

· **Odour:** Characteristic

· **Change in condition**

Melting point/freezing point: -117 °C

Initial boiling point and boiling range: 131 °C

· **Flash point:** 42 °C

· **Ignition temperature:** 340 °C

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

· **Explosion limits:**

Lower: 1.2 Vol %

Upper: 10.5 Vol %

· **Vapour pressure at 20 °C:** 3.7 hPa

· **Density at 20 °C:** 0.81 g/cm³

· **Solubility in / Miscibility with**

Water at 20 °C: 30 g/l

· **Viscosity:**

dynamic: Not determined.

kinematic: Not determined.

· **9.2 Other information** No further relevant information available.

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.

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- **10.3 Possibility of hazardous reactions**
Reactions with strong oxidizing agents
Reacts with alkaline metals
Reacts with earth alkaline metals
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Hydrogen

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

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

Oral	LD50	1300 mg/kg (rat)
Dermal	LD50	3216 mg/kg (rabbit)
	LC50/96h	700 mg/l (Forelle)

- **Primary irritant effect:**
- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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**
May cause respiratory irritation.
- **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.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

EC50/48h	260 mg/l (Daphnia magna)
EC50/72h	493 mg/l (Scenedesmus subspicatus)

- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:**
The product is rapidly biodegradable.
84 % in 27 d
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
· **ADR, IMDG, IATA** UN1105
- **14.2 UN proper shipping name**
· **ADR** 1105 PENTANOLS
· **IMDG** PENTANOLS
· **IATA** Pentanol
- **14.3 Transport hazard class(es)**
· **ADR, IMDG, IATA**

· **Class** 3 Flammable liquids.
· **Label** 3
- **14.4 Packing group**
· **ADR, IMDG, IATA** III
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Warning: Flammable liquids.
· **Danger code (Kemler):** 30
· **EMS Number:** F-E,S-D
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **ADR**
- **Limited quantities (LQ)** 5L
- **Transport category** 3
- **Tunnel restriction code** D/E
- **UN "Model Regulation":** UN1105, PENTANOLS, 3, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction:** 3, 40
- **National regulations**
- **Technical instructions (air):**

Class	Share in %
NK	80-100

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- **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:** Product safety department
- **Contact:** +49 6221 13840-35

- **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

CLP: Regulation on classification, labelling and packaging of substances and mixtures

ADR: Accord européen sur le transport 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

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

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

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

- *** Data compared to the previous version altered.**