Safety data sheet
according to UK REACH

Printing date 22.07.2025 *Version number 4* *Revision: 22.07.2025*

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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:** Security Department Phone: +49 6221 13840-34
· **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)

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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.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
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 GB CLP regulation.
· **Hazard pictograms:** GHS02, GHS07
· **Signal word:** Warning
· **Hazard statements:**
H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H315 Causes skin irritation.

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H319 Causes serious eye irritation.
H335 May cause respiratory 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **Additional information:**
EUH066 Repeated exposure may cause skin dryness or cracking.
· **Labelling of packages where the contents do not exceed 125 ml**
· **Hazard pictograms** GHS02, GHS07
· **Signal word** Warning
· **Hazard statements** Void
· **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.
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:** PBT - Assessment not available.
· **vPvB:** vPvB - Assessment not available.
· **Determination of endocrine-disrupting properties** No further relevant information available.

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SECTION 3: Composition/information on ingredients

· **3.1 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:** $C_5H_{12}O$
· **MW:** 88.15

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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:**
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
· **After skin contact:**
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 and consult a doctor.
Do not induce vomiting!
· ***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.

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SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:***
CO_2, 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:***
Formation of hazardous vapours and gases possible during heating or in case of fire.
Vapours may form flammable and explosive mixtures with air.
Flammable substance, vapours are heavier than air and spread over the ground.
In case of fire or if heated, pressure in the container increases and may burst.
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.

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SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective clothing.
Ensure adequate ventilation
Keep away from ignition sources
Take action to prevent static discharges.
Particular danger of slipping on leaked/spilled product.
· ***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.
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.

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SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling:***
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Keep away from heat and direct sunlight.
Open and handle receptacle with care.
· ***Information about protection against explosions and fires:***
Protect against electrostatic charges.

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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.
· **Information about storage in one common storage facility:** Do not store together with oxidizing materials.
· **Further information about storage conditions:** Store containers tightly closed and dry.
· **7.3 Specific end use(s):** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **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/m³, 125 ppm Long-term value: 366 mg/m³, 100 ppm

· **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.
· **Breathing equipment:**
Short term filter device:
Filter A/P2.
· **Hand protection:**
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 trough 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/face protection:** Tightly sealed goggles.
· **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information:**
· **Physical state:** Liquid

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· **Colour:**	Colourless
· **Odour:**	Characteristic
· **Odour threshold:**	not determined.
· **Melting point/freezing point:**	-117 °C
· **Boiling point or initial boiling point and boiling range:**	131-132 °C
· **Flammability:**	Flammable liquid and vapour according to GB CLP Regulation (EU) No. 1272/2008: Flam. Liq. 3 H226 Flammable.
· **Lower and upper explosion limit:**	
· **Lower:**	1.2 Vol %
· **Upper:**	~8 Vol %
· **Flash point:**	43 °C
· **Auto-ignition temperature:**	340 °C
· **Decomposition temperature:**	Not determined.
· **pH:**	No information available
· **Viscosity:**	
· **Kinematic viscosity:**	No information available
· **Dynamic viscosity:**	No information available
· **Solubility:**	
· **Water at 20 °C:**	25 g/l
· **Partition coefficient n-octanol/water (log value):**	No information available
· **Vapour pressure at 20 °C:**	2.7 hPa
· **Density and/or relative density:**	
· **Density at 20 °C:**	0.808-0.818 g/cm³
· **Relative density:**	No information available

· **9.2 Other information**	
· **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. Not determined.
· **Molecular weight**	88.15 g/mol

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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:**
Reactions with strong oxidizing agents
Vapours may form flammable and explosive mixtures with air.
· **10.4 Conditions to avoid:**
Avoid high temperatures, flames and sparks
Moisture
· **10.5 Incompatible materials:**
Avoid contact with:
strong oxidizers
different plastic materials
· **10.6 Hazardous decomposition products:** In case of fire: see section 5

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
· **Acute toxicity:** Harmful if inhaled.

· LD/LC50 values that are relevant for classification:		
Oral	LD50	1,300 mg/kg (rat)
Dermal	LD50	3,216 mg/kg (rabbit)
	LC50/96h	700 mg/l (fish)

· **Primary irritant effect:**
· **Skin corrosion/irritation:** Causes skin irritation.
· **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:** 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.
· **11.2 Information on other hazards:**
· **Endocrine disrupting properties:** No relevant information available

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SECTION 12: Ecological information

· **12.1 Toxicity:**

· Aquatic toxicity:	
EC50/48h	260 mg/l (Daphnia magna)
EC50/72h	493 mg/l (algae)

· **12.2 Persistence and degradability:** No further relevant information available.
· **Other information:**
The product is readily biodegradable.
84 % in 27 d
· **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:** 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.

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· **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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SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1105
· **14.2 UN proper shipping name**	
· **ADR**	1105 PENTANOLS
· **IMDG, IATA**	PENTANOLS
· **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.
· **Hazard identification number (Kemler code):**	30
· **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)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1105 PENTANOLS, 3, III

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**
· **Regulated explosives precursors** Substance is not listed.

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· **Regulated poisons** Substance is not listed.
· **Reportable explosives precursors** Substance is not listed.
· **Reportable poisons** Substance is not listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not 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, 40
· **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 %
NK	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:** Product Safety Department
· **Contact:** +49 6221 13840-34
· **Date of previous version:** 02.05.2018
· **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)
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
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3