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Safety Data Sheet according to UK REACH (SI 2020/1577) as amended

Printing date 11.07.2025 Version number 2 (replaces version 1) Revision: 11.07.2025

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

· 1.1 Product identifier

· Trade name: Isoamyl Alcohol 3-Methyl-1-butanol

· Product Code: 40-1600

· 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
- · Product category PC21 Laboratory chemicals
- · Application of the substance / the mixture Laboratory chemicals
- · Uses advised against

Processes involving extreme heat use advised against.

Any use involving aerosol formation or vapour release in excess of the assigned Workplace Exposure Limit where workers are exposed without suitable Respiratory Protective Equipment.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Severn Biotech Ltd.

Unit 2.

Park Lane,

Kidderminster.

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286 Fax: 0044 1562 825284

email: info@severnbiotech.com

- · Further information obtainable from: Product safety department.
- · 1.4 Emergency telephone number:

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to GB-CLP

Flam. Liq. 3 H226 Flammable liquid and vapour.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

· 2.2 Label elements

· Labelling according to GB-CLP The substance is classified and labelled according to the GB CLP regulation.

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· Hazard pictograms









GHS02

02 GHS05

GHS07

· Signal word Danger

· Hazard statements

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

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

P260 Do not breathe mist/vapours/spray.

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

P302+P350 IF ON SKIN: Gently 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.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Substances
- · CAS No. Description

CAS: 123-51-3 Isoamyl alcohol · Identification number(s) · EC number: 204-633-5 · Index number: 603-006-00-7

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eve contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

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· After swallowing:

Wash mouth out with water

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

- · Information for doctor: Treat symptomatically and supportively.
- · 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

If swallowed, gastric irrigation with added, activated carbon.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

· For safety reasons unsuitable extinguishing agents: Water with full jet

· 5.2 Special hazards arising from the substance or mixture

Flammable. Vapors may travel to source of ignition and flash back.

Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

· 5.3 Advice for firefighters

· Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

· Additional information

Cool endangered receptacles with water spray.

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

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep ignition sources away - no smoking.

Particular danger of slipping on leaked/spilled product.

· 6.2 Environmental precautions:

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course in the undiluted form.

Inform authorities in case of gas release.

· 6.3 Methods and material for containment and cleaning up:

Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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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.

· Information about fire - and explosion protection:

Do not heat up to temperatures close to flash point.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Flammable gas-air mixtures may form in empty receptacles.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Prevent any seepage into the ground.

- Information about storage in one common storage facility: Store away from oxidising agents.
- · Further information about storage conditions:

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed receptacles.

Store in a bunded area.

- · Storage class: 3
- · 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:						
CAS: 123-51-3 Isoamyl alcohol						
WEL Short-term value: 458 mg/m³, 125 ppm						
Long-term value: 366 mg/m³, 100 ppm						
· DNELs						
Oral	Long-term systemic effects	12.5 mg/kg bw/day (general population)				
Inhalative	Long-term local effects	13 mg/m³ (general population)				
		73.16 mg/m³ (worker)				
	Short-term local effects	218 mg/m³ (general population)				
		292 mg/m³ (worker)				

- · Additional information: The lists valid during the making 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.

Wash hands before breaks and at the end of work.

Take note of assigned Workplace Exposure Limits.

Do not inhale gases / fumes / aerosols.



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Avoid contact with the eyes and skin.

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

Ensure that eyewash stations and safety showers are close to the workstation location.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A for organic vapours

· Hand protection



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Nitrile rubber, NBR

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

Break-through time: > 480 minutes

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 conforming to EN166.

· Body protection:



Flame retardant antistatic protective clothing.

Body protection must be chosen depending on product properties, activity and possible exposure.

- · Environmental exposure controls Do not let product enter drains. Risk of explosion.
- · Risk management measures The operators shall be instructed adequately.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

 $\cdot \ General \ Information$

Physical state
 Colour:
 Odour:
 Odour threshold:
 Melting point/freezing point:

Liquid

 Colourless
 Unpleasant
 Not determined.
 -117.2 °C

Boiling point or initial boiling point and boiling range 131 – 132 °C
 Flammability
 Not applicable.

· Lower and upper explosion limit

• **Lower:** 1.2 Vol %

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	(*************************************
· Upper:	~ 8 Vol %
· Flash point:	43 °C
· Auto-ignition temperature:	340 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
water at 20 °C:	25 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	2.7 hPa
Density and/or relative density	2.7 III u
Density at 20 °C:	0.81 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
	Not determined.
· 9.2 Other information	NOTE: The physical data presented above are typical
	values and should not be construed as a specification.
· Appearance:	
· Form:	Fluid
· Important information on protection of health a	nd
environment, and on safety.	
Ignition temperature:	Not determined.
· Explosive properties:	Product is not explosive. However, formation of explosive
	air/vapour mixtures are possible.
· Molecular weight	88 g/mol
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Not applicable
· Flammable gases	Not applicable
· Aerosols	Not applicable
· Oxidising gases	Not applicable
· Gases under pressure	Not applicable
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Not applicable
Self-reactive substances and mixtures	Not applicable
	Not applicable Not applicable
· Pyrophoric liquids	* *
· Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Not applicable
Substances and mixtures, which emit flammable ga	
in contact with water	Not applicable
Oxidising liquids	Not applicable
Oxidising solids	Not applicable
Organic peroxides	Not applicable
· Corrosive to metals	Not applicable
· Desensitised explosives	Not applicable



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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:

At elevated temperatures, explosive vapour/air mixtures may be formed.

No decomposition if used and stored according to specifications.

- · 10.3 Possibility of hazardous reactions Reacts violently with oxidising agents.
- · 10.4 Conditions to avoid Heat and static discharge.
- 10.5 Incompatible materials: Strong oxidising agents.
- · 10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

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 relevant for classification:

		> 2,000 mg/kg (rat)
Dermal	LD50	> 3,000 mg/kg (rabbit)

- · Primary irritant effect:
- · Skin corrosion/irritation Causes skin irritation.
- $\cdot \ Serious \ eye \ damage/irritation$

Causes serious eye damage.

- · 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.
- · Additional toxicological information:

ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.

EFFECTS OF SHORT-TERM EXPOSURE: The product is irritating to the eyes and the respiratory tract. May cause effects on the central nervous system.

- · 11.2 Information on other hazards
- · Endocrine disrupting properties Substance is not listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

EC50 (96 h) 0.7 mg/l (Bacteria)

- · 12.2 Persistence and degradability Inherently biodegradable
- 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- · 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.

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- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- · 12.7 Other adverse effects
- · 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.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

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

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- · Uncleaned packaging:
- · Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

• Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1	UN	number	or ID	number
--------	----	--------	-------	--------

· ADR/RID/ADN, IMDG, IATA UN1105

· 14.2 UN proper shipping name

· ADR/RID/ADN UN1105 PENTANOLS, ENVIRONMENTALLY

HAZARDOUS

· IMDG, IATA PENTANOLS

- · 14.3 Transport hazard class(es)
- · ADR/RID/ADN



· Class 3 (F1) Flammable liquids.

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· Label	3		
· IMDG			
· Class · Label	3 Flammable liquids. 3		
· IATA			
№ 3			
· Class · Label	3 Flammable liquids.		
	3		
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	Ш		
 14.5 Environmental hazards: Marine pollutant: Special marking (ADR/RID/ADN): 	Environmentally hazardous substance, liquid Symbol (fish and tree) Symbol (fish and tree)		
· 14.6 Special precautions for user · Hazard identification number (Kemler code):	Warning: Flammable liquids.		
 Hazchem Code: EMS Number: Stowage Category	•3Y F-E,S-D A		
• 14.7 Maritime transport in bulk according to IMO instruments Not applicable.			
· Transport/Additional information:	Amounts up to 5kg or 5L per single or inner package do not require the Environmentally Hazardous mark in accordance with ADR 5.2.1.8.1 and IMDG 2.10.2.7.		
· ADR/RID/ADN · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml		
· Transport category	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3		
· Tunnel restriction code	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		



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· UN "Model Regulation": UN 1105 PENTANOLS, 3, III, ENVIRONMENTALLY

HAZARDOUS

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.
- · Regulated poisons Substance is not listed.
- · Reportable explosives precursors Substance is not listed.
- · Reportable poisons Substance is not listed.
- · Control Of Major Accident Hazards Regulations 2015 (COMAH)
- · Named dangerous substances ANNEX I Substance is not listed.
- · COMAH category

E2

P₅c

- · Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · 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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

· Department issuing SDS: Product safety department.

· 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

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

DNEL: Derived No-Effect Level (UK REACH)

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 Dam. 1: Serious eye damage/eye irritation – Category 1

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

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

* Data compared to the previous version altered.