

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.11.2021

Revision: 25.11.2021

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

· 1.1 Product identifier

· **Trade name:** Molecular Biology Grade Iso-Propanol

· **Article number:** 40-1650-10

· **CAS Number:**

67-63-0

· **EC number:**

200-661-7

· **Index number:**

603-117-00-0

· **Registration number** 01-2119457558-25

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Product category**

PC1 Adhesives, sealants

PC3 Air care products

PC4 Anti-Freeze and de-icing products

PC8 Biocidal products

PC9a Coatings and paints, thinners, paint removers

PC9b Fillers, putties, plasters, modelling clay

PC9c Finger paints

PC12 Fertilisers

PC14 Metal surface treatment products

PC36 Water softeners

PC15 Non-metal-surface treatment products

PC16 Heat transfer fluids

PC17 Hydraulic fluids

PC18 Ink and toners

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC23 Leather treatment products

PC24 Lubricants, greases, release products

PC25 Metal working fluids

PC26 Paper and board treatment products

PC27 Plant protection products

PC28 Perfumes, fragrances

PC29 Pharmaceuticals

PC30 Photo-chemicals

PC31 Polishes and wax blends

PC32 Polymer preparations and compounds

PC33 Semiconductors

PC34 Textile dyes, and impregnating products

PC35 Washing and cleaning products (including solvent based products)

PC37 Water treatment chemicals

PC38 Welding and soldering products, flux products

PC39 Cosmetics, personal care products

PC40 Extraction agents

PC41: Oil and gas exploration or production products

PC 0: Other: masonry treatment products

PC 0: Other: monomer in polymer

PC 0: Other: Oil in water emulsion breaker

PC 0: Other: Cleaning agents

PC 0: Other: Oilfield Chemicals

PC 0: Other: Processing solvent

PC 0: Other: Writing agents, Other writing materials

· **Application of the substance / the mixture**

The substance has many industrial, professional and consumer applications.

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- **Uses advised against**

Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure limits where workers are exposed without suitable respiratory protective equipment (RPE).

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.

Processes involving extreme heat use advised against.

The product is intended exclusively for industrial and professional use.

- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/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:**

UK National Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **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** Danger

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

- **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/hearing protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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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.

P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

- **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**
67-63-0 Propan-2-ol
- **Identification number(s)**
- **EC number:** 200-661-7
- **Index number:** 603-117-00-0

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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
DO NOT DELAY!
Wash mouth out with water
Drink plenty of water and provide fresh air. Call for a doctor immediately.
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**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray.
Alcohol resistant foam
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Highly flammable liquid.
Vapours form explosive mixtures with air.
Mixable with water.
Volatile.

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- **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.

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.
- **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.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Send for recovery or disposal in suitable receptacles.
 - 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.
 - Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
 - Welding and other hot work operations in the work area must only be permitted under supervision.
 - Conduct maintenance and other work on or in storage/reactor/mixing vessels or closed spaces ONLY under strict Permit to Work conditions.
- **Information about fire - and explosion protection:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - The vapour mixes well with air, explosive mixtures are easily formed.

Flash point: 12 °C
 Ignition temperature: 399 °C
 Temperature class: T2
 Explosion group: IIA
 Lower explosion limit: 2 vol. %, 50 g/m³
 Upper explosion limit: 13 vol. %, 335 g/m³
 Limiting oxygen concentration (LOC): 8.7 vol. %
 Conductivity: 5,8 * 10 Exp -06 S/m, Temperature: 25 °C
- **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.
 - Recommended storage temperature: +5 to +30 degree C.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.

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- Store in a banded area.
- Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

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

67-63-0 Isopropanol

WEL	Short-term value: 1250 mg/m ³ , 500 ppm
	Long-term value: 999 mg/m ³ , 400 ppm

- **DNELs**
- WORKERS**
- Long-term exposure - systemic effects
- Dermal DN(M)EL
 - DNEL (Derived No Effect Level): 888 mg/kg bw/day
- Inhalation DN(M)EL
 - DNEL (Derived No Effect Level): 500 mg/m³
- GENERAL POPULATION**
- Long-term exposure - systemic effects
- Dermal DN(M)EL
 - DNEL (Derived No Effect Level): 319 mg/kg bw/day
- Inhalation DN(M)EL
 - DNEL (Derived No Effect Level): 89 mg/m³
- Oral DN(M)EL
 - DNEL (Derived No Effect Level): 26 mg/kg bw/day
- **PNECs**
- PNEC aqua (freshwater): 140.9 mg/L
- PNEC aqua (marine water): 140.9 mg/L
- PNEC STP: 2251 mg/L
- PNEC sediment (freshwater): 552 mg/kg sediment dw
- PNEC sediment (marine water): 552 mg/kg sediment dw
- PNEC soil: 28 mg/kg soil dw
- PNEC oral: 160 mg/kg food
- **Additional information:** The lists valid during the making 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.
- Avoid contact with the eyes and skin.
- Do not eat, drink, smoke or sniff while working.
- Do not inhale gases / fumes / aerosols.
- Ensure that washing facilities are available at the work place.
- Take note of assigned Workplace Exposure Limits.
- 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.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- **Respiratory protection:**
- Use suitable respiratory protective device in case of insufficient ventilation.
- Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· **Protection of hands:**



Protective gloves

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**

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.

Gloves suitable for permanent contact: Material: Nitrile rubber/nitrile latex

Break through time: ≥ 480 min

Material thickness: 0.35 mm

Material: butyl-rubber

Break through time: ≥ 480 min

Material thickness: 0.5 mm

Gloves suitable for splash protection: Material: Polychloroprene

Break through time: ≥ 240 min

Material thickness: 0.5 mm

Unsuitable glove: Material: Natural rubber/natural latex, Polyvinylchloride

· **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.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

Solvent resistant protective clothing

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

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Clear
Odour:	Alcohol-like

· **pH-value (- g/l) :** neutral

· **Change in condition**

Melting point/freezing point:	-88.5 °C
Initial boiling point and boiling range:	82 °C

· **Flash point:** 12 °C

· **Ignition temperature:** 399 °C

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

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· Explosion limits:	
Lower:	2 Vol %
Upper:	13 Vol %
· Vapour pressure at 20 °C:	60 hPa
· Density at 20 °C:	0.79 g/cm ³
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	0.05 log POW
· Viscosity:	
Dynamic at 20 °C:	2.43 mPas
· 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Isopropyl alcohol vapour is heavier than air and is highly flammable with a very wide combustible range. It should be kept away from heat and open flame. When mixed with air or other oxidizers it can explode through deflagration.
- **10.3 Possibility of hazardous reactions**
No dangerous reactions known.
Risk of explosion in contact with: strong oxidizing agents; nitric acid; oxygen; hydrogen peroxide; barium perchlorate; sodium dichromate; phosgene / iron salt; nitrogen dioxide; trinitro methane.

The substance can react dangerously with: alkali metals; aluminium; amines; chlorine; strong acids; hydrogen peroxide; aldehydes; aluminium triisopropoxide; chlorine compounds; chromium trioxide; ironpotassium-tert.-butoxide; oleum; palladium + hydrogen; phosgene; phosphorus trichloride.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Substances specifically listed in section 10.3 as incompatible.
Strong oxidising agents.
Aluminium, alkali metals, alkaline-earth metals.
Halogens.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Propane; propene; ethane; ethene; acetylene; formaldehyde; carbon monoxide; water.
- **Additional information:**
Highly flammable liquid.
Vapours form explosive mixtures with air.
Mixable with water.
Volatile.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
Oral	LD50	>2000 mg/kg (rat)

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- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Will defat and dry the skin.
Frequent or prolonged contact may irritate and cause dermatitis.
 - **Serious eye damage/irritation**
Causes serious eye irritation.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **Other information (about experimental toxicology):** The liquid defats the skin.
 - **Additional toxicological information:**
ROUTES OF EXPOSURE: The substance can be absorbed into the body by ingestion and by inhalation of its vapour.
- A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.
- The substance may cause effects on the central nervous system, resulting in depression. Use of alcoholic beverages enhances the harmful effect.
Exposure far above the WEL may result in unconsciousness.
- **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 drowsiness or dizziness.
 - **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 >10000 mg/kg (daphnia) |
- **12.2 Persistence and degradability** Easily biodegradable
 - **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
 - **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:** Not applicable.
 - **vPvB:** Not applicable.
 - **12.6 Other adverse effects** No further relevant information available.

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.

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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:**

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**

- **ADR, IMDG, IATA** 1219

- **14.2 UN proper shipping name**

- **ADR** 1219 ISOPROPANOL (ISOPROPYL ALCOHOL)
- **IMDG, IATA** ISOPROPANOL (ISOPROPYL ALCOHOL)

- **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

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

- **Transport/Additional information:**

- **ADR**

- **Limited quantities (LQ)** 1L

- **Transport category** 2

- **Tunnel restriction code** D/E

- **UN "Model Regulation":** UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

SECTION 15: Regulatory information

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

- **Directive 2012/18/EU**

- **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

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· **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.· **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 (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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

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

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

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