

Safety data sheet

according to 1907/2006/EC, Article 31 as amended

Printing date 29.01.2024

Version number 3

Revision: 29.01.2024

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

· 1.1 Product identifier

· **Trade name:** Acetone (>99.8% purity)

· **Article number:**

100ml: 40-1900-01

500ml: 40-1900-05

1000ml: 40-1900-10

· **CAS Number:**

67-64-1

· **EC number:**

200-662-2

· **Index number:**

606-001-00-8

· **Registration number** 01-2119471330-49-XXXX

· 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 reagent

Solvents

· **Uses advised against**

Any use involving aerosol formation or vapour release in excess of the assigned WEL where workers are exposed without suitable RPE.

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

Processes involving extreme heat use advised against.

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

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:

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 Regulation (EC) No 1272/2008**



GHS02 flame

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



GHS07

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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 GB CLP regulation.

· **Hazard pictograms** GHS02, GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Acetone

· **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.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

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

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

· 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**

67-64-1 Acetone

· **Identification number(s)**

· **EC number:** 200-662-2

· **Index number:** 606-001-00-8

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 rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

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Do not induce vomiting; call for medical help immediately.

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

· **Information for doctor:**

Inhalation of the vapours in high concentration or for long periods of time leads to narcosis, burning of the eyes and skin, drowsiness, 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**

TREATMENT: Monitor respiration; danger of narcosis after inhaling the vapours in high concentration or for a long period of time. Artificial respiration may be necessary.

Initiate inhalative cortisone therapy. Check the acid/alkali balance. Latency of several hours is possible.

After swallowing do not give any milk or digestible oils. Activated charcoal (20-60 g) and sodium sulfate (1 tablespoon/250 ml) should reduce absorption.

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**

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 a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

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

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

· **Additional information**

Absorb gas/vapours with water spray.

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**

Ensure adequate ventilation

Keep ignition sources away - no smoking.

Wear protective equipment. Keep unprotected persons away.

Vapours are heavier than air. They can spread along the ground and collect in confined spaces.

· **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

· **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.

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.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Use solvent-proof equipment.

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.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Vapour is heavier than air. Beware of accumulation in pits and confined spaces.

· Information about fire - and explosion protection:

Ground and bond containers when transferring material.

Do not spray onto a naked flame or any incandescent material.

Flammable gas-air mixtures may form in empty receptacles.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Ensure that all current relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products are followed.

Use explosion-proof apparatus / fittings and spark-proof tools.

· 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.

Do not store on combustible materials such as wooden floors or wooden pallets.

· 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.

Protect from heat and direct sunlight.

· Storage class: 3

· 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 section 7.

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

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WEL	Short-term value: 3620 mg/m ³ , 1500 ppm
	Long-term value: 1210 mg/m ³ , 500 ppm

· DNELs

67-64-1 Acetone

Oral	DNEL Long-term systemic effects	62 mg/kg bw/day (general population)
Dermal	DNEL Long-term systemic effects	62 mg/kg bw/day (general population) 186 mg/kg bw/day (worker)
Inhalative	DNEL Long-term systemic effects	200 mg/m ³ (general population) 1,210 mg/m ³ (worker)
	DNEL Short-term local effects	2,420 mg/m ³ (worker)

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· PNECs
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PNEC Freshwater	10.6 mg/L
PNEC Freshwater - Intermittent releases	21 mg/L
PNEC Marine water	1.06 mg/L
PNEC Sewage Treatment Plant	100 mg/L
PNEC Sediment (freshwater)	30.4 mg/kg
PNEC Sediment (marine water)	3.04 mg/kg
PNEC Soil	29.5 mg/kg

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

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.

Avoid alcohol consumption while working with the product.

Ensure that washing facilities are available at the work place.

Take note of assigned Workplace Exposure Limits.

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

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.

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.

Filter A for organic vapours

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.

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

· Protection of hands:


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

Butyl rubber, BR

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 protection:


Tightly sealed goggles conforming to EN166.

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· **Body protection:**

Flame retardant antistatic protective clothing.

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

· **Limitation and supervision of exposure into the environment**

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**· **General Information**· **Appearance:**

Form:	Liquid
Colour:	Colourless
Odour:	Acetone-like
Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

Melting point/freezing point:	-94.7 °C
Initial boiling point and boiling range:	55.8 – 56.6 °C

· **Flash point:** < -18 °C· **Flammability (solid, gas):** Highly flammable.· **Auto-ignition temperature:** 465 °C· **Decomposition temperature:** Not determined.· **Ignition temperature:** Not determined.· **Explosive properties:** Not determined.· **Explosion limits:**

Lower:	2.6 Vol %
Upper:	13 Vol %

· **Vapour pressure at 20 °C:** 233 hPa· **Vapour pressure at 50 °C:** 800 hPa

Density at 20 °C:	0.79 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

Dynamic at 20 °C:	32 mPas
Kinematic:	Not determined.
VOC (EC)	100.00 %

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· 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:**
At elevated temperatures, explosive vapour/air mixtures may be formed.
- **10.3 Possibility of hazardous reactions**
Reacts violently with oxidising agents.
Reacts with alkali (lyes).
Reacts with reducing agents.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:**
Strong oxidising agents.
Strong bases.
Halogenated hydrocarbons
Substances specifically listed in section 10.3 as incompatible.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

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:
67-64-1 Acetone

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	> 10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	76 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: May have effects on the blood and bone marrow.
Prolonged or repeated skin contact may irritate and cause dermatitis.
- **Additional toxicological information:**
ROUTES OF EXPOSURE: Can be absorbed into the body by ingestion, by inhalation (mist and vapour) and through the skin.
INHALATION RISK: A harmful contamination of the air will be reached very quickly on evaporation of this substance at 20°C.
EFFECTS OF SHORT-TERM EXPOSURE: The product is irritating to the eyes and the respiratory tract. May cause effects on the central nervous system.
If ingested, early diagnosis and treatment is essential.
The substance may cause effects on the kidneys and central nervous system, resulting in renal failure and brain injury. Exposure could cause lowering of consciousness.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.
- **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.

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- **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:

67-64-1 Acetone

EC50 (96 h)	8,800 mg/l (Bacteria)
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- **12.2 Persistence and degradability** Readily 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.

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.

Contact manufacturer for recycling information.

· European waste catalogue

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

· Uncleaned packaging:

· Recommendation:

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

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

Disposal must be made according to official regulations.

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.

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SECTION 14: Transport information

· 14.1 UN-Number · ADR/RID/ADN, IMDG, IATA	UN1090
· 14.2 UN proper shipping name · ADR/RID/ADN · IMDG, IATA	UN1090 ACETONE ACETONE
· 14.3 Transport hazard class(es) · ADR/RID/ADN, IMDG, IATA	 · Class 3 Flammable liquids. · Label 3
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D E
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1090 ACETONE, 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

Substance is not listed.

· Regulated poisons

Substance is not listed.

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· Reportable explosives precursors
Listed

· Reportable poisons
Substance is not listed.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** Substance is not listed.

- **Seveso category P5c**

- **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
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 listed.

· Regulation (EC) No 273/2004 on drug precursors
3

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
3

- **National regulations:**

- **Information about limitation of use:**

Class	Share in %
NK	100.0

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

- **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)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

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

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