

Safety Data Sheet

#90032308 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
3-Hydroxybutyric acid	300-85-6	C4H8O3	10	12 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name 3-Hydroxybutyric acid

CAS number 300-85-6

EC / EINECS number 206-099-9

Chemical formula C4H8O3

Molecular weight 104.10

SMILES CC(CC(=O)O)O

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

Research and development. Laboratory Chemicals. Manufacture of substances.
Not suitable for human consumption or veterinary purposes.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Skin Corr. 1B; H314

2.2 Label elements



WARNING

CODE	HAZARD STATEMENT
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H314 (sub cat. 1B)	Causes severe skin burns and eye damage
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CODE	PRECAUTIONARY STATEMENT
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P261	Avoid breathing dust/fume/gas/mist/vapours/spray
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P280	Wear protective gloves/protective clothing/eye protection/face protection
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P302+352	IF ON SKIN: Wash with soap and water
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P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
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P305+351+338	IF IN EYES: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
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P308+313	IF exposed or concerned: Get medical advice/attention
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2.3 Other hazards

Not classified as PBT or vPvB according to current UK criteria.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	3-Hydroxybutyric acid
CAS number	300-85-6
EC number	206-099-9
Concentration / purity	~ 100.0 %
Classification according to Regulation (EC) No 1272/2008	Skin Corr. 1B; H314
Hazard statements	H314 (sub cat. 1B)
Acute toxicity estimate (ATE)	Not reported
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: Seek medical attention and bring these instructions. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.
Skin contact	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Irritation of nose, throat and airway, difficulty breathing and coughing; skin redness and irritation; eye irritation; may cause irritation if ingested.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Combustible.

Carbon monoxide (CO)

Carbon dioxide (CO₂)

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Wear positive-pressure SCBA and appropriate protective clothing; cool containers exposed to heat with water spray and keep run-off out of sewers and watercourses.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Do not breathe dust. Avoid contact with skin and eyes. For personal protection, see section 8. Provide adequate ventilation. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

6.2 Environmental precautions

Avoid discharge into drains or watercourses or onto the ground.

6.3 Methods and material for containment and cleaning up

Collect small spills; absorb large spills with non-combustible absorbent material, place in sealed labelled waste containers and flush area with plenty of water.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature 2 to 8 °C

Conditions for safe storage (incompatibilities) Tightly closed; keep locked up or in an area accessible only to qualified or authorised persons.
Hygroscopic. Store under inert gas.
Storage class 8A (combustible, corrosive hazardous materials).

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL) Contains no substances with occupational exposure limit values.

DNEC/PNEC data Provide adequate general and local exhaust ventilation; ensure the ventilation system is regularly maintained and tested.

8.2 Exposure controls

Eye / face protection	Safety glasses Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Gloves: Butyl Rubber, 0.7mm (480 mins).
Respiratory protection	Full-face respirator Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	Wear appropriate clothing to prevent repeated or prolonged skin contact; wash after use and do not eat, drink or smoke when using.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Viscous liquid DERIVED FROM: LITERATURE
Colour	Colourless DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	No data available
Boiling point	118-120°C (244.4-248°F) @ 2 mm Hg DERIVED FROM: LITERATURE
Flammability	Not applicable
Lower and upper explosion limit	No data available
Flash point	112 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Acidity	Acid DERIVED FROM: LITERATURE
Kinematic viscosity	No data available
Solubility	Soluble in water DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	No information available DERIVED FROM: LITERATURE

Vapour pressure	No information available DERIVED FROM: LITERATURE
Density (g/mL)	1.126 g/mL DERIVED FROM: LITERATURE
Relative vapour density	No information available DERIVED FROM: LITERATURE
Particle characteristics	No data available

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No specific reactivity hazards stated; see other subsections of Section 10.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability

Stable at normal ambient temperatures and under prescribed storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with:
Oxidising agents
Strong acids
Strong alkalis

10.4 Conditions to avoid

Moisture sensitive; store under inert gas.
Strong heating

10.5 Incompatible materials

Acids, alkalis, strong oxidising agents.

10.6 Hazardous decomposition products

See section 5

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50)	Acute toxicity estimate Oral - 2,501 mg/kg
Skin corrosion / irritation	Causes severe burns
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	Based on available data the classification criteria are not met (respiratory and skin).

Carcinogenicity	Based on available data the classification criteria are not met; not listed by IARC.
Mutagenicity	Based on available data the classification criteria are not met.
Reproductive toxicity	Based on available data the classification criteria are not met.
STOT (single / repeated exposure)	Single exposure: may cause respiratory irritation (respiratory system, lungs); repeated exposure: classification criteria not met.
Aspiration hazard	Based on available data the classification criteria are not met.

11.2 Information on other hazards

Does not contain components considered to have endocrine disrupting properties at levels of 0.1% or higher.

SECTION 12

Ecological information

12.1 Toxicity

Not regarded as dangerous for the environment; acute and chronic aquatic classification criteria not met.

12.2 Persistence and degradability

The degradability of the product is not known.

12.3 Bioaccumulative potential

No data available on bioaccumulation.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Contains no components considered to be PBT or vPvB at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Dispose of in accordance with local/national regulations

SECTION 14

Transport information

14.1 UN number or ID number

UN3265

14.2 UN proper shipping name

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

14.3 Transport hazard class(es)

8



14.4 Packing group

II

14.5 Environmental hazards

No

14.6 Special precautions for user

Special precautions for user *Not applicable*

Transport category 2

Tunnel code (E)

Packing instruction (ADR) P001

Packing instruction (IMDG) P001

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

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

Substance-specific regulations (e.g. licences) Health and Safety at Work etc. Act 1974; CDG 2009 (SI 2009 No. 1348); EH40/2005 Workplace exposure limits.

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

No

SECTION 16

Other information

Revision notes / other information This version (v10) was created on 12.10.2026 and replaced v1 (24.05.2023)- H315, H319 & H335 are replaced by H314B

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.