

Safety Data Sheet

#90029593 · 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-Hydroxypropanoic acid	503-66-2	C3H6O3	10	13 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name 3-Hydroxypropanoic acid

CAS number 503-66-2

EC / EINECS number 207-974-8

Chemical formula C3H6O3

Molecular weight 90.08

SMILES O=C(O)CCO

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

Acute Tox. 4 - H302
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
STOT SE 3 - H335

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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H302+332	Harmful if swallowed or inhaled
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H315	Causes skin irritation
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H318	Causes serious eye damage
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H335	May cause respiratory irritation
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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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P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
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P302+352	IF ON SKIN: Wash with soap and water
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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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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-Hydroxypropanoic acid
CAS number	503-66-2
EC number	207-974-8
Concentration / purity	~100.0%
Classification according to Regulation (EC) No 1272/2008	Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335
Hazard statements	H302+332, H315, H318, H335
Acute toxicity estimate (ATE)	None reported
Impurities / stabilising additives	Not applicable

SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Move to fresh air, keep warm and at rest, maintain an open airway, give oxygen if breathing is difficult, and get medical attention.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes, removing contact lenses and holding eyelids open, and get medical attention.
Ingestion	Rinse mouth, give a few small glasses of water or milk, do not induce vomiting, never give anything by mouth to an unconscious person, and get medical attention if symptoms are severe or persist.

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

Headache, exhaustion and weakness on inhalation; stomach pain, nausea and vomiting if swallowed; skin redness and irritation; serious eye damage with pain, watering and redness.

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; use media suitable for the surrounding fire.

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

5.2 Special hazards arising from the substance or mixture

Containers can burst violently or explode when heated; thermal decomposition may produce toxic gases or vapours.

5.3 Advice for firefighters

Wear positive-pressure SCBA and appropriate protective clothing; evacuate area, cool containers 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

Wear protective clothing as described in Section 8, avoid contact with spilled material and inhalation of vapours/mists, and use respiratory protection if ventilation is inadequate.

6.2 Environmental precautions

Avoid discharge into drains, watercourses, onto the ground or into the aquatic environment.

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 containers for disposal, and flush area with 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

Read and follow manufacturer's recommendations and wear protective clothing as described in Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature 2 to 8 °C

Conditions for safe storage (incompatibilities) Heat sensitive. Polymerization can occur.

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) None reported

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	Chemical splash goggles Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Wear impervious protective gloves chosen in consultation with the glove supplier, changed frequently, and appropriate clothing to prevent repeated or prolonged skin contact.
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	Wash after use and before eating, smoking and using the toilet; do not eat, drink or smoke when using this product.
Environmental exposure controls	Keep container tightly sealed when not in use; check emissions comply with environmental protection legislation, using fume scrubbers or filters if necessary.

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Clear liquid DERIVED FROM: LITERATURE
Colour	Colourless DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	<i>No data available</i>
Boiling point	<i>No data available</i>
Flammability	<i>Not applicable</i>
Lower and upper explosion limit	<i>No data available</i>
Flash point	110 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	<i>No data available</i>
Decomposition temperature	<i>No data available</i>
pH	<i>No data available</i>
Acidity	Acid DERIVED FROM: LITERATURE
Kinematic viscosity	<i>No data available</i>
Solubility	<i>No data available</i>
Partition coefficient n-octanol/water (log value)	<i>No data available</i>

Vapour pressure	No data available
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Density (g/mL)	1.066 g/mL
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DERIVED FROM: LITERATURE

Relative vapour density	No data available
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Particle characteristics	No data available
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9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

See the other subsections of Section 10 for further details.

10.2 Chemical stability

Stable under the prescribed storage conditions.

10.3 Possibility of hazardous reactions

No potentially hazardous reactions known.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time; may polymerise.

10.5 Incompatible materials

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 (ATE) Oral: LD50 > 300 mg/kg < 2000 mg/kg Acute Toxicity Estimate (ATE) Inhalation: Vapours: LC50 > 10 mg/L < 20 mg/L Dermal: Criteria not met.
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Skin corrosion / irritation	Causes skin irritation.
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Eye corrosion / irritation	Causes serious eye damage.
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Respiratory / skin sensitisation	Respiratory and skin sensitisation: based on available data the classification criteria are not met.
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Carcinogenicity	Based on available data the classification criteria are not met; no ingredients listed by IARC.
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Mutagenicity	Based on available data the classification criteria are not met.
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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

Not considered an endocrine disruptor

SECTION 12**Ecological information****12.1 Toxicity**

Not regarded as dangerous for the environment; acute and chronic aquatic toxicity 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

This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (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**

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Special precautions for user Not applicable

Transport category Not applicable

Tunnel code Not applicable

Packing instruction (ADR) Not applicable

Packing instruction (IMDG) Not applicable

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 (as amended); The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) [CDG 2009]; 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 13.10.2026 and replaces v1 (24.05.2023) with no significant changes.

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.