

Safety Data Sheet

#89983702 · 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
1,3-Dihydroxymethyl-4,5-dihydroxyimidazol-2-one	1854-26-8	C5H10N2O5	10	13 Aug 2026

SECTION 1

Identification

Product name	1,3-Dihydroxymethyl-4,5-dihydroxyimidazol-2-one
CAS number	1854-26-8
Chemical formula	C5H10N2O5
Molecular weight	178.14
SMILES	C(N1C(C(N(C1=O)CO)O)O)O
EC / EINECS number	217-451-6
Recommended use & restrictions	For research use only. Not for human or animal use
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification



WARNING

CODE	PRECAUTIONARY STATEMENT
P280	Wear protective gloves/protective clothing/eye protection/face protection
Other hazards (e.g. PBT / vPvB, not classified)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII; This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII. Does not contain components considered to have endocrine-disrupting properties

SECTION 3

Composition / information on ingredients

Purity / concentration	100% 1,3-Dihydroxymethyl-4,5-dihydroxyimidazol-2-one (CAS: 1854-26-8)
Impurities / stabilising additives	None

SECTION 4

First-aid measures

Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing; give oxygen or artificial respiration if necessary; if breathing difficulties persist, get medical advice/attention.
Skin contact	After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of water; if irritation persists, consult a doctor.
Eye contact	Rinse immediately with plenty of water; remove contact lenses if present and easy to do; continue rinsing; if eye irritation persists, get medical advice/attention.
Ingestion	Rinse mouth out with water; do not induce vomiting; get medical advice/attention.
Symptoms / effects & medical attention	See Section 11.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	None known
Special hazards	Carbon oxides, nitrogen oxides (NO _x)
Advice for firefighters	Use water spray or fog for cooling exposed containers; do not enter fire area without proper protective equipment including respiratory protection.

SECTION 6

Accidental release measures

Personal precautions & PPE	Wear recommended personal protective equipment; evacuate unnecessary personnel; avoid contact with skin, eyes and clothing; use self-contained breathing apparatus and chemically protective clothing for emergency responders.
Environmental precautions	Prevent entry to sewers and public waters; notify authorities if liquid enters sewers or public waters.
Containment & clean-up methods	Collect spillage; contain the spilled material by bunding; soak up spills with inert solids such as clay or diatomaceous earth.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	2 to 8 °C
Precautions for safe handling	Avoid formation of vapours; provide local exhaust or general room ventilation; wash hands and other exposed areas before eating, drinking or smoking.
Conditions for safe storage (incompatibilities)	Keep only in the original container in a cool, well ventilated place away from heat sources and direct sunlight; keep container closed when not in use; store at ambient temperature in a dry place; incompatible with strong oxidisers.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)	<i>Not applicable</i>
DNEC/PNEC data	<i>Not applicable</i>
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	Protective gloves.
Respiratory protection	Not required 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.

SECTION 9

Physical & chemical properties

Density (g/mL)	1 g/mL DERIVED FROM: LITERATURE
Flash point	Not applicable
Acidity	Neutral DERIVED FROM: LITERATURE
Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	No data available
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	Not applicable
Boiling point	Not applicable
Solubility (water)	Not applicable
pH	Not applicable
Vapour pressure	Not applicable
Partition coefficient (log Pow)	Not applicable
Auto-ignition / decomposition temp	Not applicable

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Stable under normal conditions.
Conditions to avoid	Heat sources, direct sunlight, sources of ignition.
Incompatible materials	Strong oxidisers.
Hazardous decomposition products	See section 5

SECTION 11**Toxicological information**

Acute toxicity (LD50 / LC50)	<i>Not applicable</i>
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Skin corrosion / irritation	<i>Not applicable</i>
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Eye corrosion / irritation	<i>Not applicable</i>
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Respiratory / skin sensitisation	<i>Not applicable</i>
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Carcinogenicity	<i>Not applicable</i>
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Mutagenicity	<i>Not applicable</i>
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Reproductive toxicity	<i>Not applicable</i>
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STOT (single / repeated exposure)	<i>Not applicable</i>
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Aspiration hazard	<i>Not applicable</i>
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Endocrine disruptors	<i>Not applicable</i>
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SECTION 12**Ecological information**

Aquatic toxicity	<i>Not applicable</i>
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Persistence & degradability	<i>Not applicable</i>
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Bioaccumulative potential	<i>Not applicable</i>
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Mobility in soil	<i>Not applicable</i>
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PBT / vPvB assessment	<i>Not applicable</i>
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SECTION 13**Disposal considerations**

Waste treatment / disposal methods	Dispose of contents/container in accordance with local/regional/national/international regulations.
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SECTION 14

Transport information

UN number	Not applicable
Proper shipping name	Not applicable
Class	Not applicable
Packing group	Not applicable
Transport category	Not applicable
Tunnel code	Not applicable
Packing instruction (ADR)	Not applicable
Packing instruction (IMDG)	Not applicable
Environmental hazards	Not applicable
Special precautions for user	Not applicable

SECTION 15

Regulatory information

REACH code	Y113
UFI code	Not applicable
ECHA notification	Not applicable
Chemical safety assessment carried out?	Not applicable

SECTION 16

Other information

Revision notes / other information	Previous SDS version 1.0 published 3/13/2019 Hazard classification and labelling according to Regulation (EC) 1272/2008 All eye/face protection should comply with EN ISO 16321-1:2022 Respiratory equipment: Reusable air-purifying respirator (APR) Filter Type: ABEK Standard: EN 14387 National Regulations: -Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances Other regulations, limitations and legal regulations: -Directive 94/33/EC- The protection of young people at work
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