

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:**

N,N-bis(2-hydroxyethyl) glycine

Synonyms:

BICINE

CAS Number:

150-25-4

EC number:

205-755-1

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

Basic Intermediates, Laboratory chemicals, Synthesis of substances

Not for food or drug use, for laboratory use only.

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

TAIWAN HOPAX CHEMS. MFG. CO., LTD

No. 28 Huadong Rd., Daliao Dist., Kaohsiung City 831134

TAIWAN-ROC

Further information obtainable from:

samantha@hopax.com.tw

1.4 Emergency telephone number:

+886-7-7887600 / +886-7-7872892 Ext 314

SECTION 2. Hazards Identification**2.1 Classification of the substance or mixture**

Not a hazardous substance according to the CLP Regulation N°1272/2008 and REACH Regulation N°1907/2006/EC

2.2 Label elements**Labeling** : Not applicable**Symbol** : Not applicable**Signal word** : Not applicable**Hazard statement** :

Not a hazardous substance

Precautionary statements :

Do not eat, drink or use tobacco when using this product.

Wear respiratory protection, protective gloves and eye/face protection.

Use only in a well-ventilated area.

Wash thoroughly after handling.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT**: No data available.**vPvB**: No data available.**SECTION 3. Composition / Information on ingredients****3.1 Chemical characterisation: Substances**

Chemical Abstract Service No.(CAS No.) : 150-25-4
Identification number(s)
EC number: 205-755-1
The hazardous ingredient (%of the content) : $\geq 99\%$

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions:

No special environmental precautions required.

6.3 Methods and material for containment and cleaning up:

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7. HANDLING AND STORAGE**7.1 Precautions for safe handling****Advice on protection against fire and explosion**

Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures

General industrial hygiene practice.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Store in original, properly-sealed container in ambient conditions for temperature and humidity.

Avoid exposure of material to direct sunlight. Isolate from any source of heat or ignition.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

8.2 Exposure controls**Appropriate engineering controls**

General industrial hygiene practice.

Personal protective equipment**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of

dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

No special environmental precautions required.

SECTION 9. PHYSICAL/CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

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| Appearance: | |
| Form: | Solid Powder |
| Colour: | White |
| Odour: | No data available |
| Odour threshold: | No data available. |
| pH-value: | 3.5 - 5.0 |
| Change in condition | |
| Melting point/freezing point: | 190 °C |
| Initial boiling point and boiling range: | No data available |
| Flash point: | No data available |
| Flammability (solid, gas): | No data available |
| Decomposition temperature: | No data available |
| Auto-ignition temperature: | No data available |
| Explosive properties: | No data available |
| Explosion limits: | |
| Lower: | No data available |
| Upper: | No data available |
| Vapour pressure: | No data available |
| Density: | |
| Relative density: | No data available |
| Vapour density: | No data available |
| Evaporation rate | No data available |
| Solubility in / Miscibility with water: | 163.17 g/l at 20 °C |
| Partition coefficient: n-octanol/water | No data available |
| Viscosity: | No data available |
| Dynamic: | No data available |
| Kinematic: | No data available |
| Oxidizing properties | No data available |

9.2 Other information: No data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials:

Strong oxidizing agents.

10.6 Hazardous decomposition products:

In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity**

Oral: LD50 Oral - Rat - female - > 2,000 mg/kg

(OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

RTECS: TZ6655600

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to daphnia and other aquatic invertebrates: static test EC50 - Daphnia magna (Water flea) - > 124 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae: static test ErC50 - Pseudokirchneriella subcapitata (green algae) - >100 mg/l - 72 h
(OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability: aerobic - Exposure time 28 d
Result: 94 % - Readily biodegradable.
(OECD Test Guideline 301F)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

The chemical must be disposed or recycled in accordance with Waste Disposal Act. See www.epa.gov.tw for the information of chemical waste disposal companies and their contacts. Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. TRANSPORT INFORMATION**14.1 UN number or ID number**

ADR/RID, IMDG, IATA-DGR: Not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR: Not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR: Not applicable

14.5 Environmental hazards:

ADR/RID, IMDG Marine pollutant, IATA-DGR: No

14.6 Special precautions for user: Not applicable.

14.7 Incompatible materials

Strong oxidizing agents

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Inventory of Existing Chemical Substances in China (IECSC)**

Substance is listed.

Chemical Substance Inventory in Taiwan, China (TCSI)

Substance is listed.

Japan Existing and New Chemical Substances Inventory (ENCS)

Substance is not listed.

Korea Existing Chemicals List (KECL)

Substance is listed.

Korea Priority Existing Chemicals List (PEC)

Substance is not listed.

TSCA Chemical Substance Inventory

Substance is listed.

EU EINECS/ELINCS/NLP

Substance is listed.

New Zealand Inventory of Chemicals (NZIoC)

Substance is listed.

Philippine Inventory of Chemicals and Chemical Substances (PICCS)

Substance is listed.

Australian Inventory of Industrial Chemicals (AIIC)

Substance is listed.

Canada Domestic Substances List (DSL)

Substance is not listed.

Canada Non-domestic Substances List (NDSL)

Substance is listed.

Thailand Existing Chemicals Inventory (TECI)

Substance is not listed.

Labelling according to Regulation (EC) No 1272/2008

Not applicable

Hazard pictograms

Not applicable

Signal word

Not applicable

Hazard statements

Not applicable

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.

Abbreviations and acronyms:

NOAEL: Non Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level
 ADR: Accord européen sur le transport 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

According to Regulation 1907/2006 (EC), Article 31

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| Date that the SDS was prepared: | 2026/01/18 |
| Version: | 4.1 |

Disclaimer

This SDS was prepared sincerely on the basis of the information we could obtain. However, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information, but also the laws and regulations of the organization, area and country where the product is to be used, which shall be given the first priority.

The product is supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added hereafter. If the product is to be used beyond the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The product must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set upon each user's own responsibility.

End of Safety Data Sheet