

Ministry of Employment and Labor	Material Safety Data Sheet	Industrial Accident Prevention Korea Occupational Safety and Health Agency (KOSHA)
		AA00569-0000000027

1. PRODUCT AND COMPANY IDENTIFICATION

A. Product Name	1,3-Bis(aminomethyl)cyclohexane
B. Recommended Use and Restrictions on Use	
Recommended use	Epoxy resin hardener, nylon material, polyurethane coating
Restrictions on use	Not available
C. Supplier Information	
Company Name	GloryGlobal Co., Ltd.
Address	Room 1004, Seoul-Technopark, inside Seoul Tech, 232, Gongneung-ro, Nowon-gu, Seoul, Korea 01811
Emergency Phone Number	82-2-6223-0862

2. HAZARDS IDENTIFICATION

A. Classification of the substance or mixture

Physical hazards:	Not classified
Health hazards:	Acute toxicity – Oral: Category 4 Acute toxicity – Dermal: Category 4 Skin corrosion/irritation: Category 1A Serious eye damage/eye irritation: Category 1
Environmental hazards:	Hazardous to the aquatic environment – Acute: Category 3 Hazardous to the aquatic environment – Chronic: Category 3

B. GHS Label Elements, including precautionary statements

Hazard

Pictograms:



Signal Word:

Danger

Hazard statement:

H302: Harmful if swallowed
H312: Harmful in contact with skin
H314: Causes severe skin burns and eye damage
H412: Harmful to aquatic life with long lasting effects

Precautionary
Statements:

Prevention:

Do not breathe dust or mist.

Avoid release to the environment.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Immediately call a POISON CENTER/doctor.

Rinse mouth.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with local regulation.

C. Other hazards which do not result in classification

Not applicable

3. Composition/information on ingredients

Chemical Name	CAS No.	EC No.	Concentration
1,3-Bis(aminomethyl)cyclohexane	2579-20-6	219-941-5	100

4. First aid measures

A. Inhalation:

If affected, move to fresh air. If a burning sensation develops in throat or chest, or shortness of breath occurs, get immediate medical attention.

B. Skin:

Immediately wash exposed area with soap and water for at least 15 minutes, then flush with water.

If reddening persists, or if open sores or blisters develop, see a physician. Remove contaminated clothing and launder before re-use, using hot water and heavy-duty detergent.

C. Eye:

Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention immediately.

If physician is not immediately available, continue flushing with water. Do not use chemical antidote.

D. Ingestion:

If conscious, immediately give two large glasses of water.

Never give anything by mouth to an unconscious person. Call a physician.

E. Other precautions by the doctor

Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage.

Ensure that medical personnel are aware of the substance and take appropriate protective measures.

5. Fire-fighting measures

A. Suitable extinguishing media:

Water spray, foam, dry powder.

Unsuitable extinguishing media:

Not available.

B. Specific hazards arising from the chemical:

Combustion/decomposition products may include amines and other nitrogen compounds as well as carbon monoxide and carbon dioxide.

C. Special protective actions for fire-fighters:

Protective equipment for fire-fighters, Self-contained breathing apparatus. Use air-supplied respirator, gloves and protective goggles.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Provide adequate ventilation. Avoid inhalation of dust. Avoid skin and eye contact. Wear personal protective equipment. Keep unauthorized persons away. Refer to section 8 of SDS for personal protection details.

For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if vapor is generated.

B. Environmental precautions:

This product is harmful in the aquatic environment. Keep run-off from entering sewers, rivers, streams, lakes and other bodies of water.

C. Methods and materials for containment and cleaning up:

Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.

7. Handling and storage

A. Precautions for safe handling:

Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors.

Wash thoroughly after handling, and before eating, chewing gum, smoking or using

B. Conditions for safe storage, including any incompatibilities:

Keep in closed or covered containers when not in use.

Store in cool dry place with adequate ventilation. Do not store near heat or open flames.

8. Exposure controls/personal protection

A. Control parameters:

Not available

B. Appropriate engineering controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

C. Individual protection measures, such as personal protective equipment (PPE):

Respiratory protection:

A NIOSH/MSHA approved respirator with organic vapor cartridge is recommended, especially if product is heated or where there is insufficient ventilation.

Eye/face protection:

Chemical splash goggles in compliance with OSHA regulations and full face-shield are advised.

Skin protection:

Wear protective gloves such as Neoprene or BUNA-N. Impervious clothing and boots are recommended. Do not wear leather shoes or boots when handling this product.

Leather shoes and boots can not be decontaminated.

Discard contaminated leather shoes and boots. Product can be absorbed into leather, seep through the leather, and cause burns to the feet.

Thermal hazards:

Wear suitable protective clothing to prevent heat.

9. Physical and chemical properties and safety characteristics

A. Appearance:

Physical state:

Liquid

Color:

Colorless

B. Odor:

Amine

C. Odor threshold:

Not available

D. pH

Not available

E. Melting point/ freezing point:

<-25°C

F. Boiling point or initial boiling point and boiling range:

240°C

G. Flash point:

116°C

H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/lower flammability or explosive limits	Not available
K. Solubility	Decomposition in water
L. Vapor density	Not available
M. Density and/or relative density:	0.943 (20°C)
N. n-octanol/water (log value):	Not available
O. Auto-ignition temperature:	316°C
P. Decomposition temperature (°C)	Not available
Q. Kinematic viscosity:	5.14 (40°C)
R. Molecular weight:	142.24

10. Stability and reactivity

A. Chemical stability and possibility of hazardous reactions

Stable under recommended storage and handling conditions.

Stable under normal conditions of use and storage.

Hazardous reactions are not expected under normal conditions of use.

B. Conditions to avoid (e.g., static discharge, shock, vibration)

Incompatible materials: Open flames

C. Incompatible materials:

Avoid contact with strong oxidizing agents and strong mineral acids.

D. Hazardous decomposition products

Combustion/decomposition products may include amines and other nitrogen compounds as well as carbon monoxide and carbon dioxide.

11. Toxicological information

A. Information on likely routes of exposure

Not available

B. Health Hazard Information

Acute toxicity	LD50(Oral, Rat)	>300-ca. 2000mg/kg bw female
	LD50 (Dermal, Rabbit)	Not classified
	LD50 (Inhalation, Rat)	Not classified

Skin corrosion/Irritation	Causes severe skin burns and eye damage
Serious eye damage/irritation	Causes serious eye damage
Respiratory sensitization	Not classified
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT- single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

12. Ecological information

A. Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	130 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	33.1 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	56.7 mg/L	72h	Algae	OECD 201	N/A	N/A

B. Persistence and degradability

Not readily biodegradable.

C. Bioaccumulative potential

The octanol/water partition coefficient of the product is less than 3 (Log Pow = 0.783, 21.5°C); the potential for bioaccumulation is low.

D. Mobility in soil

log Koc : 1.473

E. Other adverse effects:

Not available

13. Disposal considerations

A. Disposal methods

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	UN2735	UN2735	UN2735
UN Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Bis(aminomethyl)cycl ohexane)	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Bis(aminomethyl)cycl ohexane)	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Bis(aminomethyl)cycl ohexane)
Transport hazard class(es)	8	8	8
Packing group, if applicable	I	I	I
Environmental hazards	No	No	No
Special precautions for user	See section 2	See section 2	See section 2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	-	-	-

15. Regulatory information

Safety, health and environmental regulations specific for the product in question:

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AIIC)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

A. Source of the data

European Chemicals Agency

B. The date of preparation of the latest revision of the SDS:

C. Revision count and last revision date

Version 1.1 Amended by GHS rev 6 on Jan.30th ,2024

Date of last revision 2025-03-20th

D. Abbreviations and Acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

EINECS: European Inventory of Existing Commercial Chemical Substances

IATA: ICAO-TI (Technical Instructions for the Safe Transport of Dangerous Goods by Air) by ICAO (International Civil Aviation Organization)

CAS: Chemical Substance Summary Service

LC50: Lethal Dose 50

EC50: Effective Concentration 50%

LD50: Lethal Dose 50%

This information is reliable but is provided without warranty regarding its accuracy or suitability.