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ESTD.1976 MULTI CHEM YOUR CHEMICAL PARTNER

SAFETY DATA SHEET

Glycine

SECTION 1: Identification of the substance/mixture and of the company/undertaking Trade name:

1.1 Product identifier:	
CAS Number:	56-40-6
EC number:	200-272-4
1.2 SYNONYMS	Aminoacetic acid; Glycine

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	**Glycine** is classified as a **non-hazardous substance** under most major regulations, including the **CLP Regulation (1272/2008)** and **REACH**. Therefore, it does **not have any specific classification** related to health, environmental, or physical hazards.
2.2 Label elements:	not require
Signal Word:	None
Hazard statements:	**None** required
Precautionary Statements:	**not require precautionary statements** under the **CLP Regulation (EC) No 1272/2008**.
2.3 Other hazards:	
Inhalation:	Low hazard for usual industrial handling.

Ingestion:	Ingestion of large amounts may cause gastrointestinal irritation. Low hazard for usual industrial ha
Skin Contact:	Low hazard for usual industrial handling. May be absorbed through the skin.
Eye contact:	No information regarding eye irritation and other potential effects was found. Contact may cause transient eye irritation.
Chronic Exposure:	No information foun

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	amino acid
CAS No:	56-40-6
Identification number(s):	EC number: 200-272-4

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SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid
After skin contact:	Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid

SECTION 5: Firefighting measures

5.1 Extinguishing media	Use water spray, dry chemical, carbon dioxide, or chemical foa
5.2 Advice for firefighters	wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Use proper personal protective equipment as indicated in Secti

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly

	closed. Do not get on skin or in eyes. Do not ingest or i
7.2 Conditions for safe storage, including any incompatibilities	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	Technical facilities for handling glycine should include **adequate ventilation**, **spill containment systems**, and **safe storage** areas. **Emergency safety equipment** like eyewash stations and fire extinguishers should also be readily accessible.
8.2 Exposure controls	
Appropriate engineering controls	Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure li
Personal protective equipment:	**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate protective gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to prevent skin exposure. **Respirators:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary
General protective and hygienic measures:	Wash hands after handling glycine and avoid ingestion.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	Crystalline powder
Colour:	White
Odour:	Not available
pH-value:	5.9-6.4 aq.so
Melting point/Melting range:	245 deg C de
Boiling point/Boiling range:	Not available
Flammability (solid, gaseous):	Not applicable
Ignition temperature:	No data available
Decomposition temperature:	No data available
Self-igniting:	No data available
Flash point:	No data available
Danger of explosion:	Not applicable
Explosion limits: Lower:	No data available
Explosion limits: Upper:	No data available
Vapour pressure:	Negligible.
Density at 20 °C:	1.4 g/cm³ (approx.)
Relative density:	1.4 g/cm³
Vapour density:	No data available
Evaporation rate:	extremely low
Solubility in / Miscibility with- ·water at 20 °C:	54.4 G/100 ML W
Partition coefficient:(n-octanol/water)	-2.0 to -3.0
Viscosity:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under normal temperatures and pressures.
10.3 Possibility of hazardous reactions	Low
10.4 Conditions to avoid	Incompatible materials, excess heat
10.5 Incompatible materials	Strong oxidizing agents, strong bases
10.6 Hazardous decomposition products	Nitrogen oxides, carbon monoxide, carbon dioxide, ammonia.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	**LD50/LC50:** CAS# 56-40-6: Oral, mouse: **LD50** = 4920 mg/kg; Oral, rat: **LD50** = 7930 mg/kg.
Skin corrosion/Irritation:	No
Serious eye damage/irritation:	• Redness or bloodshot eyes • Watery eyes • Burning or stinging sensation • Swelling of the eyelid • Blurry vision or difficulty focusing
Respiratory damage/irritation:	it could potentially irritate the respiratory tract, causing symptoms like coughing, throat irritation, or difficulty breathing. This risk is higher with fine powders or if it is aerosolized.
Ingestion:	• Nausea • Vomiting • Diarrhea • Stomach cramps
Germ cell mutagenicity:	Glycine is not classified as a **germ cell mutagen**.
Carcinogenicity:	Glycine is **not classified as carcinogenic**.
Reproductive toxicity:	**No significant evidence** to suggest that glycine causes reproductive toxicity
Specific target organ toxicity - single exposure:	**not known to cause specific target organ toxicity**
Specific target organ toxicity - repeated exposure:	not associated with specific target organ toxicity from repeated exposure under typical conditions.
Aspiration hazard:	not considered an aspiration hazard
Signs and Symptoms of Exposure:	Refer section 2.3
11.2 Additional toxicological information	
Aquatic Toxicity:	**Low Aquatic Toxicity**: Glycine does not have significant harmful effects on aquatic organisms (e.g., fish, invertebrates, algae) at the concentrations typically encountered in nature or as part of normal biological processes.

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Biodegradability:	Glycine is biodegradable and readily broken down by microorganisms in water, which further reduces the potential for long-term environmental harm.

SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	**low aquatic toxicity**.
12.2 Persistence and degradability:	Low persistence
12.3 Bioaccumulative potential:	low bioaccumulative potential**.**
12.4 Mobility in soil:	high mobility in soil
12.5 Other adverse effects	Biodegradable.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging Recommendation:	Rinse and Clean Before Disposal **recycling** should be the first option for disposal
Recommended cleansing agents:	Water (Preferred) Mild Detergents (If Necessary) Isopropyl Alcohol (IPA) (For Thorough Cleaning) Vinegar Solution (For Cleaning Stains or Odors) Baking Soda Paste (For Stubborn Residue) Commercial Cleaning Agents (If Necessary)

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	None
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	Not applicable
14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	Not applicable
14.4 Packing group · ADR, IMDG, IATA:	Not applicable
14.5 Environmental hazards:	generally considered **non-hazardous**
14.6 Special precautions for user	Personal Protective Equipment (PPE) Gloves Eye Protection Dust Mask or Respirator

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU	Glycine does **not fall into any category** under **Directive 2012/18/EU** (Seveso III Directive), as it is **not classified as a hazardous substance** that poses a significant risk of a major accident involving dangerous substances.
Named dangerous substances	glycine **is** not listed as a named dangerous substance
15.2 Chemical safety assessment:	Not required

SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product