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## Material Safety Data Sheet

### Diglycolamine MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Diglycolamine

**CAS#:** 929-06-6

**Synonym:** 2-(2-Aminoethoxy)ethanol

**Chemical Formula:** C4H11NO2

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#### Section 2: Composition and Information on Ingredients

Composition	Concentration(weight percent,%)	CAS No.	EC No.
Diglycolamine	98	929-06-6	213-195-4

#### Section 3: Hazards Identification

**Hazard class and label elements of the product according to GHS (sixth revised edition):**

**ClassGHS Hazard Class**


**Acute Toxicity Acute - Oral** Category 5

**Acute Toxicity** Category 4

**Dermal**

**Skin**

**Corrosion/Irritation** Category 1

<b>Eye Damage/Irritation</b>	Category 1
ElementsGHS Label	
Pictogram	
Signal Word	<b>Danger</b>
StatementsHazard	
H303	May be harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
<b>Precautionary Statements</b>	
<b>Prevention</b>	
<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
<b>P264</b>	Wash ... thoroughly after handling.
<b>P280</b>	Wear protective gloves/clothing/eye protection/face protection.
<b>Response</b>	
<b>P312</b>	Call a POISON CENTER/doctor,if you feel unwell.
<b>P363</b>	Wash contaminated clothing before reuse.
<b>P304+340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<b>P362+364</b>	Take off contaminated clothing and wash it before reuse.
<b>P301+330+331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<b>P303+361+353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
<b>P305+351+338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	
<b>P405</b>	Store locked up.
<b>Disposal</b>	
<b>P501</b>	Dispose of contents/container in accordance with local/regional/national/ international regulations.

<b>Section 4: First Aid Measures</b>	
<b>Description of First Aid Measures</b>	
<b>General Advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

**Skin Contact** Take off contaminated clothing and shoes immediately. Wash with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

**Ingestion** Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

**Inhalation** Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

**Protecting of First-aiders** Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

**Most Important Symptoms and Effects, both Acute Delayed**

Substance accumulation, in the human body, may occur and cause some concern following repeated or long-term occupational exposure.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

1. Treat symptomatically.
2. Symptoms may be delayed.

**Section 5: Fire and Explosion Data**

**Extinguishing Media**

**Suitable Extinguishing Media**

Dry chemical, carbon dioxide or alcohol-resistant foam.

**Unsuitable Extinguishing Media**

Do not use a solid water stream as it may scatter or spread fire.

Specific Hazards Arising from the Substance or Mixture

1. Fire may produce irritating, poisonous or corrosive gases.
2. Containers may explode when heated.
3. Fire exposed containers may vent contents through pressure relief valves.
4. May expansion or decompose explosively when heated involved in fire.

**Advice for Firefighters**

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent)and full protective gear.

Fight fire from a safe distance, with adequate cover.

Prevent fire extinguishing water from contaminating surface or the ground water system.

**Section 6: Accidental Release Measures**

**Personal Precautions, Protective Equipment and Emergency Procedures**

1. Ensure adequate ventilation. Remove all sources of ignition.
2. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3. Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

**Environmental Precautions**

1. Prevent further leakage or spillage if safe to do so.
2. Discharge into the environment must be avoided.

**Methods and Materials for Containment Cleaning Up**

1. Absorb spilled material in dry sand or inert absorbent. In case of large amount spillage, contain a spill by bunding.
2. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
3. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**Section 7: Handling and Storage**

- Precautions for Handling**
1. Handling is performed in a well ventilated place.
  2. Wear suitable protective equipment.
  3. Avoid contact with skin and eyes.
  4. Keep away from heat/sparks/open flames/ hot surfaces.
  5. Take precautionary measures against static discharges.
- Precautions for Storage**
1. Keep containers tightly closed.
  2. Keep containers in a dry, cool and well-ventilated place.
  3. Keep away from heat/sparks/open flames/ hot surfaces.
  4. Store away from incompatible materials and foodstuff containers.

**Section 8: Exposure Controls/Personal Protection**

**Control Parameters**

**Occupational Exposure Limit Values**

Component	Country/Region	Limit Value - Eight Hours		Limit Value - Short Term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Diglycolamine 929-06-6	Germany(DFG)	0.2	0.87	0.2	0.87

**Biological Limit Values**  
**No information available**

- Monitoring Methods**
1. EN 14042 Workplace atmospheres. Guide for the application and use of procedures assessment of exposure to chemical and biological agents.
  2. GBZ/T 160.1~GBZ/160.81-2004 Determination of toxic substances in workplace air

- Engineering Controls**
- 1.Ensure adequate ventilation, especially in confined areas.
  - 2.Ensure that eyewash stations and safety showers are close to the workstation location.
  - 3.Use explosion-proof electrical/ventilating lighting/equipment.
  - 4.Set up emergency exit and necessary risk-elimination area.

**Personal Protection Equipment**

**Eye Protection** Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).

**Hand Protection** Wear protective gloves (such as butyl rubber), passing the tests according to 374(EU),US F739 or AS/NZS 2161.1 standard.

**Respiratory protection** If exposure limits are exceeded or if irritation other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.  
**Skin and Body Protection** Wear fire/flame resistant/retardant clothing and antistatic boots.

### Section 9: Physical and Chemical Properties

**Appearance:** Colorless liquid  
**Odor:** No information available  
**Odor Threshold:** No information available  
**pH:** 10.2  
**Melting Point/Freezing Point (°C):** No information available  
**Initial Boiling Point and Range (°C):** 222.6  
**Flash Point (°C)( Closed Cup):** 127  
**Evaporation Rate:** No information available  
**Flammability:** Not applicable  
**Upper/lower explosive limits[%(v/v)]:** Upper limit: 15.5; Lower limit : 2.0  
**Vapor Pressure (MPa):** <10 mBar  
**Vapor Density (g/mL):** No information available  
**Relative Density (g/cm<sup>3</sup>):** 1.06  
**Solubility:** Miscible with water  
**n-Octanol/Water Partition Coefficient:** -1.89  
**Auto -Ignition Temperature(°C):** 370  
**Decomposition Temperature (°C):** No information available  
**Kinematic Viscosity (mm<sup>2</sup>/s):** No information available  
**Particle characteristics:** Not applicable

### Section 10: Stability and Reactivity Data

**Reactivity** Contact with incompatible substances can cause decomposition or other chemical reactions.  
**Chemical Stability** Stable under proper operation and storage conditions.  
**Possibility of Hazardous** Reactions No information available  
**Conditions to Avoid** Incompatible materials, heat, flame and spark.  
**Incompatible Materials** No information available  
**Hazardous Decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Section 11: Toxicological Information

#### Acute Toxicity

Component	CAS No.	LD <sub>50</sub> (Oral)	LD <sub>50</sub> (Dermal)	LD <sub>50</sub> (Inhalation, 4h)
Diglycolamine	929-06-6	3000mg/kg(rat)	No information available	No information available

**Skin Corrosion/Irritation**

Causes severe skin burns and eye damage(Category 1)(Diglycolamine)

**Serious Eye Damage/Irritation**

Causes serious eye damage(Category 1)(Diglycolamine)

**Skin Sensitization**

No information available

**Respiratory Sensitization**

No information available

**Germ Cell Mutagenicity**

No information available

**Carcinogenicity**

ID	CAS No.	Component	IARC	NTP
1	929-06-6	Diglycolamine	Not listed	Not listed

**Reproductive Toxicity**

No information available

**Reproductive Toxicity (Additional)**

No information available

**STOT-Single Exposure**

No information available

**STOT-Repeated Exposure**

No information available

**Aspiration Hazard**

No information available

**Section 12: Ecological Information**

**Acute Aquatic Toxicity**

No information available

**Chronic Aquatic Toxicity**

No information available

**Others**

**Persistence and Degradability** No information available

**Bioaccumulative Potential** No information available

**Mobility in Soil** No information available

**Results of PBT and vPvB Assessment**

Diglycolamine does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

### Section 13: Disposal Considerations

#### Waste Chemicals

Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

#### Contaminated Packing Disposal

Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

#### Recommendations

Refer to section 13.1 and 13.2.

### Section 14: Transport Information

#### Transporting Label



<b>Marine pollutant</b>	None
<b>UN Number</b>	3055
<b>UN Proper Shipping Name</b>	2-(2 -AMINOETHOXY)ETHANOL
<b>Transport Hazard Class</b>	8
<b>Transport Subsidiary Hazard Class</b>	None
<b>Packing Group</b>	III

### Section 15: Other Regulatory Information

#### International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Diglycolamine	√	√	√	√	√	√	√	√	×

**[EINECS]** European Inventory of Existing Commercial Chemical Substances.

**[TSCA]** United States Toxic Substances Control Act Inventory.

**[DSL]** Canadian Domestic Substances List.

**[IECSC]** China Inventory of Existing Chemical Substances.

**[NZIoC]** New Zealand Inventory of Chemicals.

**[PICCS]** Philippines Inventory of Chemicals and Chemical Substances.

**[KECI]** Existing and Evaluated Chemical Substances.

**[AICS]** Australia Inventory of Chemical Substances.

**[ENCS]** Existing And New Chemical Substances.

#### Note

"√" Indicates that the substance included in the regulations

"×" That no data or included in the regulations

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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