

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

## 1 Identification

- **Product identifier**
- **Trade name:** *Diethanolamine Laboratory Grade, 99%*
- **Article number:** D4500
- **CAS Number:**  
111-42-2
- **EC number:**  
203-868-0
- **Index number:**  
603-071-00-1
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity 2      H351 Suspected of causing cancer.



GHS05 Corrosion

Eye Damage 1      H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4      H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** *Danger*

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: Diethanolamine Laboratory Grade, 99%**

(Contd. of page 1)

- **Hazard statements**

Harmful if swallowed.  
Causes serious eye damage.  
Suspected of causing cancer.

- **Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Call a poison center/doctor if you feel unwell.  
Rinse mouth.  
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.  
IF exposed or concerned: Get medical advice/attention.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## \* 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

CAS: 111-42-2 Diethanolamine

- **Identification number(s)**

- **EC number:** 203-868-0

- **Index number:** 603-071-00-1

## 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Generally the product does not irritate the skin.

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: Diethanolamine Laboratory Grade, 99%**

(Contd. of page 2)

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 3 mg/m<sup>3</sup>
- **PAC-2:** 28 mg/m<sup>3</sup>
- **PAC-3:** 130 mg/m<sup>3</sup>

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: Diethanolamine Laboratory Grade, 99%

(Contd. of page 3)

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 111-42-2 Diethanolamine

REL Long-term value: 15 mg/m<sup>3</sup>, 3 ppmTLV Long-term value: 1\* mg/m<sup>3</sup>

Skin; \*inhalable fraction and vapor, A3

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Color: Colorless

- **Odor:** Ammonia-like

- **Odor threshold:** Not determined.

- **pH-value:** 11

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: Diethanolamine Laboratory Grade, 99%

(Contd. of page 4)

· <b>Change in condition</b>	
Melting point/Melting range:	28 °C (82.4 °F)
Boiling point/Boiling range:	217 °C (422.6 °F)
· <b>Flash point:</b>	176 °C (348.8 °F)
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Auto igniting:</b>	370 °C (698 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Ignition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	2.1 Vol %
Upper:	10.6 Vol %
· <b>Vapor pressure at 10 °C (50 °F):</b>	2 hPa (1.5 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.0899 g/cm <sup>3</sup> (9.09522 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
Water at 20 °C (68 °F):	954 g/l
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b>	
Dynamic at 20 °C (68 °F):	111 mPas
Kinematic:	Not determined.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	500 mg/kg (ATE)
------	------	-----------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: Diethanolamine Laboratory Grade, 99%**

(Contd. of page 5)

- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer) 2B**
- **NTP (National Toxicology Program) Substance is not listed.**
- **OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.**

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 2 (Assessment by list): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |                                  |  |
|----------------------------------|--|
| · <b>UN-Number</b>               |  |
| · <b>DOT, IMDG, IATA</b>         | UN2735   |
| · <b>UN proper shipping name</b> |  |
| · <b>DOT</b>                     | Amines, liquid, corrosive, n.o.s. (Diethanolamine) |
| · <b>IMDG, IATA</b>              | AMINES, LIQUID, CORROSIVE, N.O.S. (Diethanolamine) |

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: Diethanolamine Laboratory Grade, 99%

(Contd. of page 6)

· **Transport hazard class(es)**· **DOT**

· **Class** 8 Corrosive substances  
 · **Label** 8

· **IMDG, IATA**

· **Class** 8 Corrosive substances  
 · **Label** 8

· **Packing group**· **DOT, IMDG, IATA** III· **Environmental hazards:**· **Marine pollutant:** No· **Special precautions for user** Warning: Corrosive substances· **Poison inhalation hazard:** No· **EMS Number:** F-A,S-B· **Segregation groups** (SGG18) Alkalis· **Stowage Category** A· **Segregation Code** SG35 Stow "separated from" SGG1-acids

· **Transport in bulk according to Annex II of  
 MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**· **DOT**· **Hazardous substance:** 100 lbs, 45.4 kg

· **UN "Model Regulation":** UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S.  
 (DIETHANOLAMINE), 8, III

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
 No further relevant information available.

· **Sara**· **Section 355 (extremely hazardous substances):** Substance is not listed.· **Section 313 (Specific toxic chemical listings):** Substance is listed.· **TSCA (Toxic Substances Control Act):** ACTIVE· **Hazardous Air Pollutants** Substance is listed.· **Proposition 65**· **Chemicals known to cause cancer:** Substance is listed.· **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.· **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.

(Contd. on page 8)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: Diethanolamine Laboratory Grade, 99%**

(Contd. of page 7)

- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** A3
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05    GHS07    GHS08

- **Signal word** *Danger*
- **Hazard statements**  
*Harmful if swallowed.*  
*Causes serious eye damage.*  
*Suspected of causing cancer.*
- **Precautionary statements**  
*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*Wash thoroughly after handling.*  
*Do not eat, drink or smoke when using this product.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*If swallowed: Call a poison center/doctor if you feel unwell.*  
*Rinse mouth.*  
*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.*  
*IF exposed or concerned: Get medical advice/attention.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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.*

- **Department issuing SDS:** Environment protection department.
- **Contact:**  
*Date of Preparation / Last Revision:*
- **Date of preparation / last revision**  
*Revision 1.2 07/18/2024: Reviewed SDS for accuracy. MH/STN*  
*07/19/2024 / -*
- **Abbreviations and acronyms:**  
*IMDG: International Maritime Code for Dangerous Goods*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*

(Contd. on page 9)



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: Diethanolamine Laboratory Grade, 99%**

(Contd. of page 8)

vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Acute Toxicity - Oral 4: Acute toxicity – Category 4  
Eye Damage 1: Serious eye damage/eye irritation – Category 1  
Carcinogenicity 2: Carcinogenicity – Category 2  
· **\* Data compared to the previous version altered.**

US