

## Diethanolamine

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Diethanolamine
<b>Other Means of Identification</b>	DEA, Diolamine, Di(2-hydroxyethyl)amine, Ethanol,2,2'iminobis
<b>Product Code(s)</b>	DI3510
<b>Product Family</b>	Organic solution
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	1222

### SECTION 2. HAZARD IDENTIFICATION

#### Classification

Acute toxicity (Oral) - Category 4; Skin irritation - Category 2; Serious eye damage - Category 1; Carcinogenicity - Category 2; Specific target organ toxicity (repeated exposure) - Category 2

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

Causes serious eye damage.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.  
May cause respiratory irritation.

#### Precautionary Statement(s):

##### Prevention:

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash hands and skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe dust/fume/gas/mist/vapours/spray.

---

Product Identifier:	Diethanolamine - Ver. 1
Date of Preparation:	December 07, 2017
Date of Last Revision:	December 07, 2017

Use only outdoors or in a well-ventilated area.

Response:

Immediately call a POISON CENTRE or doctor.

IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

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.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### Other Hazards

Harmful to aquatic life.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Diethanolamine	111-42-2	85.0	Diolamine, Di(2- hydroxyethyl) amine, Ethanol,2, 2'iminobis	
Water	7732-18-5	15.0	Dihydrogen oxide	

#### Notes

Above concentrations are in weight %.

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Avoid mouth-to-mouth contact by using a barrier device. Immediately call a Poison Centre or doctor.

##### Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

##### Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor. Specific treatment is required.

##### Ingestion

Do not induce vomiting. Immediately call a Poison Centre or doctor.

##### First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

#### Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may

Product Identifier: Diethanolamine - Ver. 1

Date of Preparation: December 07, 2017

Date of Last Revision: December 07, 2017

result.

## **Immediate Medical Attention and Special Treatment**

### **Special Instructions**

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

#### **Unsuitable Extinguishing Media**

None known.

### **Specific Hazards Arising from the Product**

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

### **Special Protective Equipment and Precautions for Fire-fighters**

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

protective gear. Approach fire from upwind to avoid hazardous vapours or gases. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

### **Environmental Precautions**

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any waterway.

### **Methods and Materials for Containment and Cleaning Up**

Contain and soak up spill with absorbent that does not react with spilled product. (e.g.: dry sand/earth/vermiculite). Place used absorbent into suitable, covered, labelled containers for disposal.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Wear personal protective equipment to avoid direct contact with this chemical. Do not breathe in this product. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

### **Conditions for Safe Storage**

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

---

Product Identifier: Diethanolamine - Ver. 1

Date of Preparation: December 07, 2017

Date of Last Revision: December 07, 2017

Page 03 of 07

**Control Parameters**

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Diethanolamine	1 mg/m3 A3		3 ppm			
Water	Not established		Not established			

A3 = Animal carcinogen.

**Appropriate Engineering Controls**

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

**Individual Protection Measures****Eye/Face Protection**

Wear chemical safety goggles and face shield when contact is possible.

**Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****Basic Physical and Chemical Properties**

<b>Appearance</b>	Colourless liquid.
<b>Odour</b>	Ammonia-like
<b>Odour Threshold</b>	Not available
<b>pH</b>	11
<b>Melting Point/Freezing Point</b>	0 °C (32 °F) (melting); 0 °C (32 °F) (freezing)
<b>Initial Boiling Point/Range</b>	100 - 268 °C (212 - 514 °F)
<b>Flash Point</b>	138 °C (280 °F)
<b>Evaporation Rate</b>	< 0.01
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	9.8 - 10.6% (upper); 1.6 - 2.1% (lower)
<b>Vapour Pressure</b>	< 0.01 mm Hg (0.00 kPa) at 20 °C
<b>Vapour Density (air = 1)</b>	3.65
<b>Relative Density (water = 1)</b>	1.09
<b>Solubility</b>	Soluble in water; Not available (in other liquids)
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	-2.18 at 25 °C
<b>Auto-ignition Temperature</b>	375 - 662 °C (707 - 1224 °F)
<b>Decomposition Temperature</b>	285 °C (545 °F)
<b>Viscosity</b>	~ 100 mm <sup>2</sup> /s (kinematic); 390.9 mPa.s (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Molecular Weight</b>	105.14
<b>Other Physical Property 1</b>	Above Dynamic Viscosity measured at 30 deg C. Kinematic Viscosity measured

Product Identifier: Diethanolamine - Ver. 1

Date of Preparation: December 07, 2017

Date of Last Revision: December 07, 2017

at 23 deg C.

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

Incompatible materials. Excess heat. Prolonged contact with water, moisture or humidity. Prolonged exposure to air.

### Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), strong acids (e.g. hydrochloric acid), copper alloys, copper.

### Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Diethanolamine	> 0.4 ppm (rat) 6-hr	1730 mg/kg (male rat)	8180 mg/kg (male rabbit)
Water	Not available	> 89840 mg/kg (rat)	Not available

### Skin Corrosion/Irritation

Causes severe irritation.

### Serious Eye Damage/Irritation

Causes severe eye irritation.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

May cause nose and throat irritation.

#### Ingestion

No information was located.

### Aspiration Hazard

No information was located.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

### Respiratory and/or Skin Sensitization

No information was located.

### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Diethanolamine	Group 2B	A3	Not Listed	
Water	Not Listed	Not Listed	Not Listed	Not Listed

### Key to Abbreviations

Group 2B = Possibly carcinogenic to humans.

Product Identifier: Diethanolamine - Ver. 1

Date of Preparation: December 07, 2017

Date of Last Revision: December 07, 2017

A3 = Animal carcinogen.

### Reproductive Toxicity

#### Development of Offspring

No information was located.

#### Sexual Function and Fertility

No information was located.

#### Effects on or via Lactation

No information was located.

### Germ Cell Mutagenicity

No information was located.

### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT		AMINES, LIQUID, CORROSIVE, N.O.S. (Diethanolamine)	8	III
Canadian TDG	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S.	8	III

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL.

#### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

<b>NFPA Rating</b>	<b>Health - 3</b>	<b>Flammability - 1</b>	<b>Instability - 0</b>
<b>SDS Prepared By</b>	Alphachem Limited		
<b>Phone No.</b>	(905)-821-2995		
<b>Date of Preparation</b>	December 07, 2017		

Product Identifier: Diethanolamine - Ver. 1

Date of Preparation: December 07, 2017

Date of Last Revision: December 07, 2017

**Date of Last Revision** December 07, 2017

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.