

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1

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

### 1.1 Product identifiers

Product name : Ethylenediamine  
Product Number : E112643  
Brand : aladdin  
CAS-No. : 107-15-3

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 3), H412

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H401	Toxic to aquatic life
H412	Harmful to aquatic life with long lasting effects
Precautionary statement(s)	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P342+P311	IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.
P304+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305+P351+P338+P310	IF IN EYES: Rinse cautiously with water for several minutes. If contact lenses are worn and can be easily removed, remove Contact lenses. Continue rinsing. Immediately call an emergency center/doctor.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: 1,2-Diaminoethane; 1,2-Ethanediamine
Formula	: C <sub>2</sub> H <sub>8</sub> N <sub>2</sub>
Molecular weight	: 60.1
CAS No.	: 107-15-3
EC-NO.	: 203-468-6

Component	Classification	Concentration
Ethylenediamine	no data available	purified by redistillation, ≥99.5%

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

no data available

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Flash back possible over considerable distance. Container explosion may occur under fire conditions. Vapors may form explosive mixture with air. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened

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must be carefully resealed and kept upright to prevent leakage. Air and moisture sensitive. Handle and store under inert gas.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                    |                               |
|--------------------|-------------------------------|
| a) Appearance      | form: Liquid color: Colorless |
| b) Odour           | no data available             |
| c) Odour Threshold | no data available             |

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d) pH	no data available
e) Melting point/freezing point	8.5 °C
f) Initial boiling point and boiling range	118 °C
g) Flash point	38 °C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	0.898
n) Water solubility	Soluble in water and alcohol, insoluble in benzene, slightly soluble in ether.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Violent reactions possible with: acid halides perchlorates Acrolein Halogenated hydrocarbon Acid chlorides Alcohols Aldehydes phosphorus halides Exothermic reaction with: chlorosulfonic acid Hydrogen chloride gas acetic acid Acetic anhydride fuming sulfuric acid Oxidizing agents acryl aldehyde acids carbon disulfide silver perchlorate vinyl acetate acrylic acid 1-chloro-2,3-epoxypropane Risk of explosion with: Nitromethane with Tetryl (N-Methyl-N-2,4,6-tetranitroaniline) nitric acid (conc.) Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

### 10.4 Conditions to avoid

Air Exposure to moisture. Heating.

### 10.5 Incompatible materials

no data available

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## 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

Oral: No data available LC50 Inhalation - Rat - male - 4 h - 14.7 mg/l - vapor Remarks: (ECHA)

LD50 Dermal - Rabbit - male - 560 mg/kg Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit Result: Corrosive - 15 min Remarks: (ECHA) Remarks: Causes poorly healing wounds.

Serious eye damage/eye irritation

Eyes - Rabbit Result: Corrosive Remarks: (ECHA) Remarks: Causes serious eye damage.

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429) (Regulation (EC) No 1272/2008, Annex VI) (Regulation (EC) No 1272/2008, Annex VI)

Germ cell mutagenicity

Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: positive Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) Test Type: unscheduled DNA synthesis assay Test system: rat hepatocytes Metabolic activation: without metabolic activation Result: negative Remarks: (ECHA) Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Remarks: (ECHA) Test Type: dominant lethal test Species: Rat Application Route: Oral Result: negative Remarks: (ECHA)

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

## SECTION 12: Ecological information

Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

## 12.1 Toxicity

Toxicity to fish semi-static test LC50 - *Poecilia reticulata* (guppy) - 640 mg/l - 96 h (Directive 67/548/EEC, Annex V, C.1.) Remarks: (ECHA) semi-static test NOEC - *Gasterosteus aculeatus* (threespine stickleback) - > 10 mg/l - 28 d  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 16.7 mg/l - 48 h (Directive 67/548/EEC, Annex V, C.2.) Remarks: (ECHA)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (algae) - 645 mg/l - 72 h (Directive 67/548/EEC, Annex V, C.3.)

Toxicity to bacteria static test EC50 - Bacteria - 3.2 mg/l - 2 h Remarks: (ECHA)

Toxicity to fish(Chronic toxicity) semi-static test NOEC - *Gasterosteus aculeatus* - > 10 mg/l - 28 d (OECD Test Guideline 210)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - *Daphnia magna* (Water flea) - 0.16 mg/l - 21 d (US-EPA)

## 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 100 % - Readily biodegradable. (OECD Test Guideline 301D)

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.



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**SECTION 14: Transport information**

## DOT (US)

UN number: 1604	Packing group: II	Class: 8 (3)
Proper shipping name: ETHYLENEDIAMINE	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: no		

## IMDG

UN number: 1604	Packing group: II	EMS-No: no data available
Proper shipping name: ETHYLENEDIAMINE		

## IATA

UN number: 1604	Packing group: II	Class: 8 (3)
Proper shipping name: ETHYLENEDIAMINE		

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**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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**SECTION 16: Other information**

<b>Prepared By</b>	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com
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