

# SAFETY DATA SHEET

Creation Date 22-Sep-2009

Revision Date 19-Dec-2025

Revision Number 5

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

**Product Name** Ethylenediamine dihydrochloride

**Cat No. :** AC187650000; AC187650025; AC187650050; AC187651000;  
AC187655000

**CAS No** 333-18-6  
**Synonyms** 1,2-Diaminoethane Dihydrochloride; 1,2-Ethanediamine Dihydrochloride.

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

### Label Elements

**Signal Word**

Danger

**Hazard Statements**

Harmful if swallowed  
 Causes skin irritation  
 Causes serious eye irritation  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 May cause an allergic skin reaction  
 May cause respiratory irritation



**Precautionary Statements**

**Prevention**

Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area  
 In case of inadequate ventilation wear respiratory protection  
 Wash face, hands and any exposed skin thoroughly after handling  
 Contaminated work clothing should not be allowed out of the workplace  
 Do not eat, drink or smoke when using this product  
 Avoid breathing dust/fume/gas/mist/vapors/spray

**Response**

Call a POISON CENTER or doctor if you feel unwell

**Inhalation**

If experiencing respiratory symptoms: Call a POISON CENTER or doctor  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
 Take off contaminated clothing  
 If skin irritation or rash occurs: Get medical advice/attention

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention

**Ingestion**

Rinse mouth  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

**Storage**

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

**Other hazards**

Hygroscopic.

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
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1,2-Ethanediamine, dihydrochloride	333-18-6	<=100
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#### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Inhalation</b>	Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Most important symptoms and effects</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
<b>Notes to Physician</b>	Treat symptomatically

#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen chloride gas.

#### Protective Equipment and Precautions for Firefighters

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

#### NFPA

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
2	1	1	N/A

#### 6. Accidental release measures

<b>Personal Precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Avoid contact with skin, eyes or clothing.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.
<b>Methods for Containment and Clean Up</b>	Sweep up and shovel into suitable containers for disposal.

#### 7. Handling and Storage

<b>Handling</b>	Ensure adequate ventilation. Wear personal protective equipment/face protection. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid dust formation. Avoid
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contact with skin, eyes or clothing. Avoid prolonged or repeated contact with skin. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation.

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** 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 and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

**Physical State** Powder Solid

**Color** Off-white

**Odor** Slight

**Odor Threshold** No information available

**Property** **Values**

**Melting Point/Range** 300 °C / 572 °F

**Softening Point** No data available

**Boiling Point/Range** No information available

**Flash Point** No information available

**Flammability (liquid)** Not applicable

**Flammability (solid,gas)** No information available

**Explosion Limits** No data available

**Remarks** • **Method**

**Method -** No information available

Solid

**Autoignition Temperature** No data available

**Decomposition Temperature** No data available

**pH** 3.9-5.0

**Viscosity** Not applicable

**Water Solubility** 300 G/L WATER (20°C)

**Solubility in other solvents** No information available

**Partition Coefficient (n-octanol/water)**

**Vapor Pressure** No data available

**Density / Specific Gravity** No data available

**Bulk Density** No data available

**Vapor Density** Not applicable

**Particle characteristics** No data available

Solid

Solid

### Other Information

**Molecular Formula** C2 H8 N2 . 2 H Cl

**Molecular Weight** 133.04  
**Evaporation Rate** Not applicable - Solid

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions. Hygroscopic.

**Conditions to Avoid** Incompatible products. Exposure to moist air or water.

**Incompatible Materials** Strong oxidizing agents

**Hazardous Decomposition Products** Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride gas

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

**Inhalation** Avoid breathing dust or spray mist. May be harmful if inhaled.  
**Ingestion** May be harmful if swallowed.  
**Eyes** Avoid contact with eyes.  
**Skin** Avoid contact with skin.

### Toxicology data for the components

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**  
**Respiratory** No data available  
**Skin** No data available  
 No information available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
1,2-Ethanediamine, dihydrochloride	333-18-6	Not listed	Not listed	Not listed	Not listed	Not listed

**(g) reproductive toxicity;** No data available

<b>(h) STOT-single exposure;</b>	No data available
<b>(i) STOT-repeated exposure;</b>	No data available
<b>Target Organs</b>	No information available.
<b>(j) aspiration hazard;</b>	Not applicable Solid
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Symptoms / effects,both acute and delayed</b>	No information available.
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Endocrine Disrupting Properties</b>	This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains. Do not flush into surface water or sanitary sewer system.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

<b><u>DOT</u></b>	Not regulated
<b><u>TDG</u></b>	Not regulated
<b><u>IATA</u></b>	Not regulated
<b><u>IMDG/IMO</u></b>	Not regulated

## 15. Regulatory Information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
1,2-Ethanediamine, dihydrochloride	333-18-6	X	ACTIVE	-

#### **Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

TSCA 12(b) - Notices of Export

Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
1,2-Ethanediamine, dihydrochloride	333-18-6	X	-	206-369-6	X	-		X	X	-

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations** Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Authorisation/Restrictions according to EU REACH** Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
1,2-Ethanediamine, dihydrochloride	333-18-6	-	-	-

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
1,2-Ethanediamine, dihydrochloride	333-18-6	Not applicable	Not applicable	Not applicable	Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
1,2-Ethanediamine, dihydrochloride	333-18-6	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other Information

<b>Prepared By</b>	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com
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<b>Revision Date</b>	19-Dec-2025
<b>Print Date</b>	19-Dec-2025
<b>Revision Summary</b>	Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## End of SDS