

SAFETY DATA SHEET

Creation Date 22-Sep-2009

Revision Date 18-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 unsym-Dimethylethylenediamine

Cat No. : AC116200000; AC116200250; AC116201000; AC116205000

CAS No 108-00-9
Synonyms 2-Dimethylaminoethylamine

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)

Flammable liquids	Category 2
Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor

Causes severe skin burns and eye damage
Harmful if swallowed or in contact with skin



Precautionary Statements

Prevention

Wear protective gloves/protective clothing/eye protection/face protection
Ground and bond container and receiving equipment
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Use explosion-proof electrical/ventilating/lighting equipment
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Keep container tightly closed
Take action to prevent static discharges
Use non-sparking tools

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Skin

Take off contaminated clothing and wash before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
Immediately call a POISON CENTER or doctor

Eyes

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 or doctor/physician

Ingestion

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

Fire

Explosion risk
Fight fire with normal precautions from a reasonable distance
Evacuate area

Storage

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

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 %
1,2-Ethanediamine, N,N-dimethyl-	108-00-9	>95

4. First-aid measures

Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. Immediate medical attention is required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Get medical attention.
Most important symptoms and effects	Difficulty in breathing. Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting; Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	No information available
Flash Point	12 °C / 53.6 °F
Method -	No information available
Autoignition Temperature	225 °C / 437 °F
Explosion Limits	
Upper	10.8%
Lower	1.3%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
 Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products
 Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

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	Health	Flammability	Instability	Physical hazards
	3	3	1	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. All equipment used when handling the product must be grounded. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Pay attention to flashback. Avoid contact with skin, eyes or clothing.
Environmental Precautions	See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and Storage

Handling	Ensure adequate ventilation. Wear personal protective equipment/face protection. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
Storage.	Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Flammables area. Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Acids. Strong oxidizing agents. Acid anhydrides. Acid chlorides. Carbon dioxide (CO2).

8. Exposure controls / personal protection

<u>Exposure Guidelines</u>	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. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.
<u>Personal Protective Equipment</u>	
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	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.
Recommended Filter type:	Particulates filter conforming to EN 143. Ammonia and organic ammonia derivatives filter. Type K. Green. conforming to EN14387.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<u>Appearance</u>	
Physical State	Liquid
Color	Light yellow
Odor	Rotten-egg like

Odor Threshold	No information available		
Property	Values	Remarks	• Method
Melting Point/Range	-70 °C / -94 °F		
Softening Point	No data available		
Boiling Point/Range	105.5 - 107 °C / 221.9 - 224.6 °F		
Flash Point	12 °C / 53.6 °F		
Flammability (liquid)	Highly flammable		Method - No information available
Flammability (solid,gas)	Not applicable		On basis of test data
Explosion Limits	Lower 1.3 Upper 10.8		Liquid
Autoignition Temperature	225 °C / 437 °F		
Decomposition Temperature	No data available		
pH	No information available		
Viscosity	No data available		
Water Solubility	Miscible		
Solubility in other solvents	No information available		
Partition Coefficient (n-octanol/water)			
Vapor Pressure	124 hPa @ 50 °C		
Density / Specific Gravity	0.800		
Bulk Density	Not applicable		Liquid
Vapor Density	No data available		(Air = 1.0)
Particle characteristics	Not applicable (liquid)		
Other Information			
Molecular Formula	C4 H12 N2		
Molecular Weight	88.15		
Explosive Properties	Vapors may form explosive mixtures with air		

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions. Hygroscopic.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. Exposure to moist air or water.
Incompatible Materials	Acids, Strong oxidizing agents, Acid anhydrides, Acid chlorides, Carbon dioxide (CO2)
Hazardous Decomposition Products	Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	Not an expected route of exposure.
Ingestion	May be harmful if swallowed.
Eyes	Corrosive to the eyes and may cause severe damage including blindness. Avoid contact with eyes.
Skin	Avoid contact with skin. Causes burns. Skin Corrosion/Irritation. Harmful in contact with skin.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation

1,2-Ethanediamine, N,N-dimethyl-	LD50 = 1135 mg/kg (Rat)	-	-
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Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data 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, N,N-dimethyl-	108-00-9	Not listed				

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available
Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects,both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties 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. Do not allow material to contaminate ground water system.

Persistence and Degradability Miscible with 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

DOT

UN-No UN2734
Proper Shipping Name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical Shipping Name (UNSYM-DIMETHYLETHYLENEDIAMINE)
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group I

TDG

UN-No UN2734
Proper Shipping Name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical Shipping Name (UNSYM-DIMETHYLETHYLENEDIAMINE)
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group I

IATA

UN-No UN2734
Proper Shipping Name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical Shipping Name (UNSYM-DIMETHYLETHYLENEDIAMINE)
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group I

IMDG/IMO

UN-No UN2734
Proper Shipping Name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical Shipping Name (UNSYM-DIMETHYLETHYLENEDIAMINE)
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group I

15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
1,2-Ethanediamine, N,N-dimethyl-	108-00-9	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, N,N-dimethyl-	108-00-9	-	X	203-541-2	X	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

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, N,N-dimethyl-	108-00-9	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

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, N,N-dimethyl-	108-00-9	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, N,N-dimethyl-	108-00-9	Not applicable	Not applicable	Not applicable	Not applicable

16. Other Information

Prepared By	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com
Creation Date	22-Sep-2009
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Print Date	18-Dec-2025
Revision Summary	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