

Safety Data Sheet

Trade name: Ethane

Current version : 1.0.0, issued: 16.01.2023

Replaced version: -, issued: -

Region: USA

SECTION 1: Identification

1.1 Product identifier

Trade name

Ethane

1.2 Recommended use of the chemical and restrictions on use

Recommended use of the chemical and restrictions on use
Refrigerant for professional use in ultra-low temperature freezers

Restrictions on use

No data available.

1.3 Details of the supplier of the safety data sheet

Address

Eppendorf North America, Inc.
175 Freshwater Blvd

Enfield, CT 06082
United States of America

Telephone no. +1 800 645 3050

Fax no. +1 516 334 7506

Information provided by / telephone

email: certificates@eppendorf,.com

Supplier

Address

Eppendorf SE
Barkhausenweg 1
D-22339 Hamburg
Germany

1.4 Emergency phone number

For medical and spill advice:

Phone: 800-451-8346 (Verisk 3E; client ID number: 12919)

SECTION 2: Hazard(s) identification

2.1 Classification of the chemical

Classification of the chemical in accordance with paragraph (d) of 29 CFR § 1910.1200 "Hazard Communication"

Flammable Gases - Category 1
Gases under Pressure - Liquefied gas

2.2 Label elements

Pictogram(s)



Signal word

Danger

Hazard Statement(s)

Physical hazards

Extremely flammable gas

Contains gas under pressure; may explode if heated

Precautionary Statement(s)

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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Response	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	Store in a well-ventilated place. Protect from sunlight. Store in a well-ventilated place.

2.3 Labelling information

No data available

2.4 Hazards not otherwise classified (HNOC)

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterization

Substance name ethane

Identification number(s)

CAS no. 74-84-0

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General information

If unconscious place in recovery position and seek medical advice.

After inhalation

Remove to fresh air, keep patient warm and at rest. Take medical treatment.

After skin contact

Do not attempt to remove any clothing that is frozen onto the skin. In case of frostbite: warm up frostbitten area by immersing the affected area in warm (but not hot) water. Remove contaminated clothing immediately and dispose of safely. Take for medical treatment.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Seek medical assistance.

After ingestion

Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam; Water mist; Extinguishing powder; Carbon dioxide

Unsuitable extinguishing media

Full water jet

5.2 Specific hazards arising from the chemical

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO). In case of fire: danger of pressure build up, which could result in container rupture.

5.3 Special protective equipment and precautions for fire-fighters

Cool endangered containers with water spray jet. As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Close leaks. Keep away from ignition sources. Refer to protective measures listed in sections 7 and 8.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Methods and materials for containment and cleaning up

Allow to evaporate.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling

Ensure adequate ventilation. Do not breathe steams or mist of the product. In case of accidental release: danger due to low temperature of the liquid product.

General protective and hygiene measures

Do not eat or drink during work - no smoking. Avoid prolonged and/or repeated contact with skin.

Advice on protection against fire and explosion

Keep away from ignition sources and provide for good ventilation. Take precautionary measures against static charges. No sparking tools should be used.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Protect from direct sunlight. Protect from temperatures over 50°C.

Requirements for storage rooms and vessels

Keep container tightly closed. Keep only in the original container (with safety valve).

Incompatible products

Do not store together with oxidizing agents.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limit(s)

No	Substance name	CAS no.
1	ethane	74-84-0
ACGIH Threshold Limit Values		
Ethane		
	TWA	(D, EX)
	Skin resorption / sensibilisation	
	Remarks	Simple asphyxiant (D); Explosion hazard (EX); see Appendix F: Minimal Oxygen Content

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the PEL (=Permissible Exposure Limit), suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Respiratory filter (gas) : AX

Eye / face protection

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Tightly fitting safety glasses

Hand protection

Sufficient protection is given wearing suitable protective gloves in the event of risk of skin contact with the product. Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other protection measures

Normal chemical work clothing.

SECTION 9: Physical and chemical properties

Form/Color	
Gas type	
colorless	
Odor	
odorless	
Odor threshold	
No data available	
pH value	
Not applicable	
Boiling point / boiling range	
Value	-88.6 °C
Melting point / melting range	
Value	-183 °C
Decomposition point / decomposition range	
No data available	
Flash point	
Not applicable	
Auto-ignition temperature	
Value	515 °C
Oxidising properties	
No data available	
Explosive properties	
No data available	
Flammability	
No data available	
Lower flammability or explosive limits	
Value	2.4 % vol
Upper flammability or explosive limits	
Value	14.3 % vol
Vapor pressure	
Value	37.8 bar
Reference temperature	20 °C
Vapor density	
Value	1
Evaporation rate	
No data available	
Relative density	
Value	0.54

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Density
No data available

Solubility in water		
Value	61	mg/l

Solubility(ies)
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity		
Value	0.08	mPa*s
Reference temperature	17.9	°C

Other information

Other information
Critical Temp.: 32 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

Vapours may form an explosive mixture with air.

10.4 Conditions to avoid

Heat, naked flames or other ignition sources, electrostatic charge and discharge, formation of vapours/aerosols.

10.5 Incompatible materials

Oxidizing agents; Formation of explosive gas/air mixtures.

10.6 Hazardous decomposition products

None, if handled according to intended use.

SECTION 11: Toxicological information

Information on toxicological effects

Acute oral toxicity
No data available

Acute dermal toxicity
No data available

Acute inhalational toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Reproduction toxicity

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No data available

Carcinogenicity

No data available

NTP Report on Carcinogens (RoC)

The substance is not listed "known" (to be a human carcinogen) or "RAHC" (reasonably anticipated to be a human carcinogen).

OSHA Standards listing cancer as a health effect (Table VII.6.2)

The substance is not considered being a "carcinogen".

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

The substance is not classified by the IARC Monographs.

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)

No data available

Toxicity to fish (chronic)

No data available

Toxicity to Daphnia (acute)

No data available

Toxicity to Daphnia (chronic)

No data available

Toxicity to algae (acute)

No data available

Toxicity to algae (chronic)

No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Other adverse effects

No data available.

12.6 Other information

Other information

Do not allow to enter soil, waterways or waste water canal.

SECTION 13: Disposal considerations

13.1 Disposal considerations

Product

Dispose in accordance with federal, state and local regulations.

Packaging

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Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in accordance with federal, state and local regulations.

SECTION 14: Transport information

14.1 US DOT (Department of Transportation)

Transport hazard class	2.1
UN/NA number	UN1035
UN proper shipping name	Ethane
Label code(s)	2.1

14.2 Transport IMDG

Class	2.1
UN number	UN1035
Proper shipping name	ETHANE
EmS	F-D, S-U
Label	2.1

14.3 Transport ICAO-TI / IATA

Class	2.1
UN number	UN1035
Proper shipping name	Ethane
Label	2.1
Remarks	Passenger aircraft: forbidden

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, pls. see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

15.1 US Federal Regulations

Toxic Substances Control Act (TSCA)

According to the data available and/or specifications supplied by upstream suppliers, all components of this product are on the TSCA Inventory or are exempted from notification requirements.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)

The substance is not subject to Table 302.4 "List of Hazardous Substances and Reportable Quantities".

Clean Air Act (CAA): Hazardous Air Pollutants (HAPS)

The substance is not a "Hazardous Air Pollutant".

Clean Water Act (CWA) Section 307 (Toxic Pollutants) and Section 311 (Hazardous Substances)

The substance is not a "Hazardous Substance".

EPCRA SARA Section 313, Toxic Chemical Release Inventory

The substance is not subject to "SARA Reporting".

Emergency Planning & Community Right-to-Know Act (EPCRA) - Sections 302 and 304

The substance is not subject to reporting requirements.

Clean Air Act (CAA) - Section 602 Ozone depleting substances

The substance is not considered being a ozone depleting substance.

15.2 US State Regulations

Pennsylvania State Right to Know Hazardous Substance List

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The substance is considered to be a "Hazardous Substance".		
No	Substance name	CAS no.
1	ethane	74-84-0

New Jersey State Right to Know Hazardous Substance List		
The substance is considered to be a "Hazardous Substance".		
No	Substance name	CAS no.
1	ethane	74-84-0

Massachusetts State Right to Know Hazardous Substance List		
The substance is considered to be a "Hazardous Substance".		
No	Substance name	CAS no.
1	ethane	74-84-0

California Code of Regulations Title 8 §339, Hazardous Substances List		
The substance is not a "Hazardous Substance".		

Right to Know - California State - Proposition 65		
The substance is not a "Hazardous Substance".		

SECTION 16: Other information, including date of preparation or last revision

16.1 Other information

No data available.

16.2 Date of preparation/revision of the SDS

Current version	1.0.0	16.01.2023
Replaced version	-	-

16.3 Department issuing safety data sheet

UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg, Germany
Tel.: +49 40 / 555 546 300 Fax: +49 40 / 555 546 357 e-mail: umco@umco.de

16.4 Conclusions

This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not, however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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Prod-ID 779099

16.5 Key / Legend

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5E - indicates a substance that is the subject of a TSCA section 5(e) order
5F - indicates a substance that is the subject of a TSCA section 5(f) rule
ACGIH - American Conference of Governmental Industrial Hygienists
ATE – Acute Toxicity Estimate
BOD - Biochemical Oxygen Demand
CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*;
CAS - Chemical Abstracts Service
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CFR - Code of Federal Regulations (US)
CLP - Classification, Labelling, and Packaging
DOT - Department of Transportation Commission
ECHA – European Chemicals Agency
EC / EL – Effective Concentration / Effective Loading
EPA - Environmental Protection Agency
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC – Intermediate Bulk Container
ICAO - International Civil Aviation Organization
IDL - Ingredient Disclosure List
IDLH - Immediately Dangerous to Life and Health
IMDG - International Maritime Dangerous Goods
IUCIID - International Uniform Chemical Information Database
Kow - Octanol/water partition coefficient
LD/LC - Lethal Dose/ Lethal Concentration
MARPOL – Marine Pollution
MEL - Maximum Exposure Limits
NFPA - National Fire Protection Agency
NIOSH - National Institute for Occupational Safety and Health
NJTSR - New Jersey Trade Secret Registry
NOEL/NOEC – No Observed Effect Level / No Observed Effect Concentration
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL- Permissible Exposure Limit
PMN - indicates a commenced Pre Manufacture Notice substance
RCRA - Resource Conservation and Recovery Act
S - indicates a substance that is identified in a final Significant New Use Rule
SARA - Superfund Amendments and Reauthorization Act
SP - indicates a substance that is identified in a proposed Significant New Use Rule
STEL - Short-term Exposure Limit
STOT – Specific Target Organ Toxicity
T - indicates a substance that is the subject of a final TSCA section 4 test rule or order
TDG - Transportation of Dangerous Goods
TLV - Threshold Limit Value
TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule or order
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
UN/NA - United Nations /North American
US - United States
VLE - Exposure Limit Value (Mexico)
VOC – Volatile Organic Compounds
XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule