

SAFETY DATA SHEET

Creation Date 03-Dec-2010

Revision Date 18-Dec-2025

Revision Number 8

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 Ethyl vinyl ether, stabilized

Cat No. : AC119080000; AC119080010; AC119080025; AC119082500

CAS No 109-92-2
Synonyms Ethoxy ethene; Vinyl ethyl ether

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
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	

Label Elements

Signal Word
Danger

Hazard Statements
Highly flammable liquid and vapor
May cause drowsiness or dizziness

**Precautionary Statements****Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground and bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Wear protective gloves/protective clothing/eye protection/face protection

Keep cool

Take action to prevent static discharges

Use non-sparking tools

Inhalation

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

Call a POISON CENTER or doctor if you feel unwell

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

Fire

In case of fire: Use CO₂, dry chemical, or foam to extinguish

Storage

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

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects

Hazards classified under paragraph (d)(1)(ii) of 1910.1200**Hazards resulting from a reaction with other chemicals under normal conditions of use**

May form explosive peroxides.

3. Composition/information on Ingredients

Component	CAS No	Weight %
Vinyl ethyl ether	109-92-2	99.9
Potassium hydroxide	1310-58-3	0.1

4. First-aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effects	None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	-45 °C / -49 °F
Method -	No information available
Autoignition Temperature	180 °C / 356 °F
Explosion Limits	
Upper	12%
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

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
2	4	2	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Ensure adequate ventilation.
Environmental Precautions	Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Handling	Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing.
Storage.	Keep away from heat, sparks and flame. Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Refrigerator/flammables. Flammables area. Keep container tightly closed in a dry and well-ventilated place. Protect from direct sunlight. Incompatible Materials. Acids. Strong oxidizing agents. oxygen. Peroxides.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Potassium hydroxide	Ceiling: 2 mg/m ³	(Vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

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

Liquid

Color

Colorless

Odor

Petroleum distillates

Odor Threshold

No information available

Property

Values

Melting Point/Range

-116 °C / -176.8 °F

Softening Point

No data available

Boiling Point/Range

36 °C / 96.8 °F

Flash Point

-45 °C / -49 °F

Flammability (liquid)

Highly flammable

Flammability (solid,gas)

Not applicable

Explosion Limits

Lower 1.3 Vol%

Upper 12 Vol%

Autoignition Temperature

180 °C / 356 °F

Decomposition Temperature

280 °C

pH

No information available

Viscosity

0.28 mPa s at 5 °C

Water Solubility

Moderately soluble

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)

Component

log Pow

Vinyl ethyl ether

1.63

Potassium hydroxide

0.83

Vapor Pressure

560 mbar @ 20 °C

Density / Specific Gravity

0.750

Bulk Density

Not applicable

Remarks

• Method

@ 760 mmHg

Method - No information available

On basis of test data

Liquid

Liquid

Vapor Density No information available (Air = 1.0)
Particle characteristics Not applicable (liquid)

Other Information

Molecular Formula C₄ H₈ O
Molecular Weight 72.11
Explosive Properties Vapors may form explosive mixtures with air
Self-accelerating polymerisation temperature (SAPT) - Heat of Polymerization (KJ/Mole) = 17.9
 Inhibitor level > 1000 ppm

10. Stability and reactivity

Reactive Hazard Yes

Stability Air sensitive.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Incompatible products.

Incompatible Materials Acids, Strong oxidizing agents, oxygen, Peroxides

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization Hazardous polymerization may occur.

Hazardous Reactions May form explosive peroxides.

11. Toxicological information

Information on expected route of exposure

Inhalation Irritating to respiratory system. May be harmful if inhaled.
Ingestion May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Eyes Irritating to eyes.
Skin Irritating to skin. May be harmful in contact with skin.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Vinyl ethyl ether	LD50 = 8160 µL/kg (Rat)	LD50 > 15080 mg/kg (Rabbit)	LC50 > 21.2 mg/L (Rat) 4 h
Potassium hydroxide	LD50 = 333-384 mg/kg (Rat) OECD Guideline 425	-	-

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

Component	Test method	Test species	Study result
Potassium hydroxide	OECD Test Guideline 406	guinea pig	non-sensitising

1310-58-3 (0.1)			
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(e) germ cell mutagenicity; No data available
Not mutagenic in AMES Test

(f) carcinogenicity;
The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Vinyl ethyl ether	109-92-2	Not listed	Not listed	Not listed	Not listed	Not listed
Potassium hydroxide	1310-58-3	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available
Results / Target organs Central nervous system (CNS).

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

(j) aspiration hazard; Based on available data, the classification criteria are not met

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

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Causes central nervous system depression.

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

Data from closely analogous substances. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Vinyl ethyl ether	EC50: = 510 mg/L, 72h (Desmodesmus subspicatus)	Not listed	EC50 > 5000 mg/L 17 h	Not listed

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Vinyl ethyl ether	1.63
Potassium hydroxide	0.83

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 UN1302
 Proper Shipping Name VINYL ETHYL ETHER, STABILIZED
 Hazard Class 3
 Packing Group I

TDG

UN-No UN1302
 Proper Shipping Name VINYL ETHYL ETHER, STABILIZED
 Hazard Class 3
 Packing Group I

IATA

UN-No UN1302
 Proper Shipping Name VINYL ETHYL ETHER, STABILIZED
 Hazard Class 3
 Packing Group I

IMDG/IMO

UN-No UN1302
 Proper Shipping Name VINYL ETHYL ETHER, STABILIZED
 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
Vinyl ethyl ether	109-92-2	X	ACTIVE	-
Potassium hydroxide	1310-58-3	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
Vinyl ethyl ether	109-92-2	X	-	203-718-4	X	X	X	X	X	KE-13357
Potassium hydroxide	1310-58-3	X	-	215-181-3	X	X	X	X	X	KE-29139

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)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Potassium hydroxide	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Potassium hydroxide	1000 lb	-	1000 lb 454 kg

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

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Vinyl ethyl ether	X	X	X	-	-
Potassium hydroxide	X	X	X	-	X

U.S. Department of Transportation

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

U.S. Department of Homeland Security

This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Vinyl ethyl ether	Release STQs - 10000lb

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)
Vinyl ethyl ether	109-92-2	-	-	-
Potassium hydroxide	1310-58-3	-	Use restricted. See entry 75.	-

			(see link for restriction details)	
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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)
Vinyl ethyl ether	109-92-2	Listed	Not applicable	Not applicable	Not applicable
Potassium hydroxide	1310-58-3	Listed	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)
Vinyl ethyl ether	109-92-2	Not applicable	Not applicable	Not applicable	Not applicable
Potassium hydroxide	1310-58-3	Not applicable	Not applicable	Not applicable	Annex I - Y35

16. Other Information**Prepared By**

Product stewardship (Regulatory Affairs)
Thermo Fisher Scientific
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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