

Material Safety Data Sheet

Created: 10/09/2009

Last Updated: 09/02/2016

➤ Section 1 - IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

MSDS Name: Ethyl Vinyl Ether stab.0.1% KOH

Synonym: Ethoxy ethene; Vinyl ethyl ether

Supplier: Nanjing Chemical Material Corp.

B12 Technology and Innovation Building, Nanjing University of Technology,
No.5 New Model Road, Nanjing, China

Tel/Fax: +86-25-83172807 / +86-25-83304509

E-mail: info@njchemm.com

Web: www.njchm.com

➤ Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	Content	EINECS#
109-92-2	Ethyl vinyl ether	99.5%min	203-718-4

Hazard Symbols: F+

Risk Phrases: 11 2 36/37/38

➤ Section 3 - HAZARDS IDENTIFICATION

Pictogram:



H225 Highly flammable liquid and vapour



EMERGENCY OVERVIEW

Highly flammable. Risk of explosion by shock, friction, fire or other sources of ignition. Irritating to eyes, respiratory system and skin. Lachrymator (substance which increases the flow of tears). Air sensitive.

Potential Health Effects

Eye:

Causes eye irritation. Lachrymator (substance which increases the flow of tears).

Skin:

Causes skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation:

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation.

Chronic:

Prolonged or repeated skin contact may cause dermatitis.

👉 Section 4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

👉 Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air.

Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air.

They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.

Water may be ineffective.

🔗 Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container

Wash area with soap and water.

Clean up spills immediately, observing precautions in the Protective Equipment section.

Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

🔗 Section 7 - HANDLING and STORAGE

Handling:

Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas.

Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges.

Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood. If peroxide formation is suspected, do not open or move container. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigerator/flammables. Regularly check inhibitor levels to maintain peroxide levels below 1%.

🔗 Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits CAS# 109-92-2: Personal Protective Equipment Eyes: 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:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

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.

➔ Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: clear, colorless

Odor: none reported

pH: Not available.

Vapor Pressure: 428 mm Hg @ 20 deg C

Viscosity: Not available.

Boiling Point: 35 deg C

Freezing/Melting Point: -116 deg C

Autoignition Temperature: 180 deg C (356.00 deg F)

Flash Point: -50 deg C (-58.00 deg F)

Explosion Limits, lower: 1.40 vol %

Explosion Limits, upper: 28.00 vol %

Decomposition Temperature:

Solubility in water: Slightly soluble.

Specific Gravity/Density: 0.7540g/cm³

Molecular Formula: C₄H₈O

Molecular Weight: 72.11

🔗 Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Not stable during routine use and handling conditions. On long term storage, substances with similar functional groups form explosive peroxides.

Conditions to Avoid:

Incompatible materials, ignition sources, exposure to air.

Incompatibilities with Other Materials:

Oxidizing agents, strong acids, oxygen.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, acrid smoke and fumes.

Hazardous Polymerization: May occur.

🔗 Section 11 - TOXICOLOGICAL INFORMATION

Acute toxicity

Oral:

LD50/rat: 6,153 mg/kg

Literature data.

Inhalation:

LC50/rat: > 21.2 mg/l / 4 h

Dermal:

LD50/rabbit: > 15,000 mg/kg

Literature data.

Skin irritation:

rabbit: non-irritant (OECD Guideline 404)

Eye irritation :

rabbit: non-irritant (OECD Guideline 405)

Chronic toxicity

Genetic toxicity:

No mutagenic effect was found in various tests with bacteria and mammalian cell culture.

Experiences in humans:

High concentrations have a narcotizing effect.

➤ Section 12 - ECOLOGICAL INFORMATION

Environmental fate and transport

Biodegradation:

Test method: ISO 14593, activated sludge, domestic

Method of analysis: TIC of the ThIC

Degree of elimination: 60 - 70 % (28 d)

Evaluation: Biodegradable.

The product is highly volatile and can be eliminated from water by stripping.

The product has not been tested. The statement has been derived from products of a similar structure and composition.

Bioaccumulation:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Environmental toxicity

Acute and prolonged toxicity to fish:

OECD Guideline 203 semistatic

zebra fish/LC50 (96 h): 28.3 mg/l

The statement of the toxic effect relates to the analytically determined concentration. The product is highly volatile. Tested in a closed test system. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Acute toxicity to aquatic invertebrates:

Directive 79/831/EEC Daphnia magna/EC50 (48 h): > 70.2 mg/l

The statement of the toxic effect relates to the analytically determined concentration. The product is highly volatile. Tested in a closed test system.

Toxicity to aquatic plants:

OECD Guideline 201 static

green algae/EC50 (72 h): 45.9 mg/l

The statement of the toxic effect relates to the analytically determined concentration. The product is highly volatile. Tested in a closed test system. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Toxicity to microorganisms:

DIN 38412 Part 8 bacterium/EC10 (17 h): > 5,000 mg/l

Nominal concentration.

OECD Guideline 209 anaerobic

activated sludge, industrial/EC20 (30 min): > 100 mg/l

Other ecotoxicological advice:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced

to biological treatment plants in appropriate low concentrations.

➔ Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

➔ Section 14 - TRANSPORT INFORMATION

UN number:

ADR/RID: 1302 IMDG: 1302 IATA: 1302

UN proper shipping name:

ADR/RID: ETHYL VINYL ETHER, STABILIZED

IMDG: ETHYL VINYL ETHER, STABILIZED

IATA: Vinyl ethyl ether, stabilized

Transport hazard class(es):

ADR/RID: 3 IMDG: 3 IATA: 3

Packaging group:

ADR/RID: I IMDG: I IATA: I

Environmental hazards:

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

no data available

➔ Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F+

Risk Phrases:

R 11 Highly flammable.

R 2 Risk of explosion by shock, friction, fire or

other sources of ignition.

R 36/37/38 Irritating to eyes, respiratory system

and skin.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 23 Do not inhale gas/fumes/vapour/spray.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 33 Take precautionary measures against static discharges.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 109-92-2: 1

Canada

CAS# 109-92-2 is listed on Canada's DSL List.

CAS# 109-92-2 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 109-92-2 is listed on the TSCA inventory.

