

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING


Product name : Ethyl vinyl ether

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008
Flammable liquids (Category 2)
Skin irritation (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)
According to European Directive 67/548/EEC as amended.
Extremely flammable. May form explosive peroxides. Irritating to eyes, respiratory system and skin.

Label elements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Precautionary statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Hazard symbol(s)	
F+	Extremely flammable
Xi	Irritant
R-phrases(s)	
R12	Extremely flammable.
R19	May form explosive peroxides.
R36/37/38	Irritating to eyes, respiratory system and skin.
S-phrases(s)	
S 3/7	Keep container tightly closed in a cool place.
S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe vapour.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33	Take precautionary measures against static discharges.
S36	Wear suitable protective clothing.
Other hazards	
Lachrymator.	

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Ethoxyethylene

Formula : C4H8O
Molecular Weight : 72,11 g/mol

CAS-No.	EC-No.		Classification	Concentration
Ethyl vinyl ether 109-92-2	203-718-4	-	Flam. Liq. 2; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H225, H315, H319, H335 <u>F+, Xi, R12 - R19 - R36/37/38</u>	-
N,N-Diethylaniline 91-66-7	202-088-8	-	Acute Tox. 3; STOT RE 2; Aquatic Chronic 2; H373, H301, H311, H331, H411 T, N, R23/24/25 - R33 - R51/53	0,1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.
Handle and open container with care. Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection
Impervious clothing, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	clear, liquid
Colour	colourless
Safety data	
pH	no data available
Melting point	-116 °C
Boiling point	33 °C
Flash point	-46 °C - closed cup
Ignition temperature	180 °C
Lower explosion limit	1,4 %(V)
Upper explosion limit	28 %(V)
Vapour pressure	747 hPa at 20 °C
Density	0,753 g/mL at 25 °C
Water solubility	no data available
Relative vapour density	2,89

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.
Materials to avoid
Oxidizing agents, Oxygen, Acids
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Contains the following stabiliser(s):
N,N-Diethylaniline (0,1 %)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 6.144,5 mg/kg
LC50 Inhalation - mouse - 15 h - 324.000 mg/m3
Remarks: BehavioralGeneral anesthetic.
LD50 Dermal - rat - > 20.000 mg/kg
Skin corrosion/irritation
Skin - rabbit - Open irritation test
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
Genotoxicity in vitro - Hamster - ovary
Sister chromatid exchange
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
no data available
Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available
Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes serious eye irritation.

Signs and Symptoms of Exposure
Liver injury may occur., inhalation or ingestion may produce an intense excited state, Unconsciousness, respiratory paralysis, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting
Additional Information
RTECS: KO0710000

12. ECOLOGICAL INFORMATION

Toxicity
no data available
Persistence and degradability
no data available
Bioaccumulative potential
no data available
Mobility in soil
no data available
PBT and vPvB assessment
no data available
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID
UN-Number: 1302 Class: 3 Packing group: I
Proper shipping name: VINYL ETHYL ETHER, STABILIZED
IMDG
UN-Number: 1302 Class: 3 Packing group: I EMS-No: F-E, S-D
Proper shipping name: VINYL ETHYL ETHER, STABILIZED
Marine pollutant: No
IATA
UN-Number: 1302 Class: 3 Packing group: I
Proper shipping name: Vinyl ethyl ether, stabilized

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
F+	Extremely flammable
N	Dangerous for the environment
R12	Extremely flammable.
R19	May form explosive peroxides.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R33	Irritating of cumulative effects.
R36/37/38	Irritating to eyes, respiratory system and skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information



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