



Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Ethyl carbamate

SDS No. : 2886E-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 4

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1B

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 3 (Narcosis)

Specific target organ toxicity – repeated exposure: Category 2 (hematopoietic system)

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed

Harmful in contact with skin

Suspected of causing genetic defects

May cause cancer

Suspected of damaging fertility or the unborn child

May cause drowsiness or dizziness

May cause damage to organs through prolonged or repeated exposure (hematopoietic system)

PRECAUTIONARY STATEMENT

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves or protective clothing.

Do not eat, drink or smoke when using this product.

Response

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.



Call a POISON CENTER or doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Rinse mouth.

Storage

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

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name: Ethyl carbamate

Content (%): 98(min)

Chemical formula: $\text{NH}_2\text{COOC}_2\text{H}_5$

Chemicals No, Japan: 2-1712

CAS No.: 51-79-6

MW: 89.09

ECNO: 200-123-1

Note: The figures shown above are not the specifications of the product.

4. First-aid measures**Descriptions of first-aid measures****General measures**

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/ flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures**Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage**Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

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

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Take off contaminated clothing and wash it before reuse.

Storage**Conditions for safe storage**

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass



8. Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals to powder

Color: Colorless to white

Odor: Odorless

Melting point/Freezing point: 49°C

Boiling point or initial boiling point: (Ethyl carbamate) 185°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point: (Ethyl carbamate)(C.C.) 92°C

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 5.0~7.0 (50g/L, 25°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 200 g/100 ml

n-Octanol/water partition coefficient: log Pow=0.15

Vapor pressure: 5 Pa (20°C)

Density and/or relative density: 0.98

Relative vapor density (Air=1): 3.1

Relative density of the Vapor/air – mixture at 20°C (Air = 1): 1

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on heating. This produces toxic fumes including nitrogen oxides. Reacts with strong oxidants, strong acids and strong bases. (ICSC 0314)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials



Strong acids, Strong bases, Strong oxidizing agents
Hazardous decomposition products
Carbon oxides, Nitrogen oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
(Ethyl carbamate)
rat LD50=1809mg/kg (RTECS, 2004)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]
(Ethyl carbamate)
rat LD50=1800mg/kg (MOHL risk assessment, 2011)

Irritant properties

Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[GHS Cat. Japan, base data]
(Ethyl carbamate)
cat. 2; mouse : JECFA 1125, 2006

Carcinogenicity

[GHS Cat. Japan, base data]
(Ethyl carbamate)
cat.1B; IARC Gr. 2A (IARC 96, 2010)
(Ethyl carbamate)
IARC-Gr.2A : Probably carcinogenic to humans
(Ethyl carbamate)
EU-Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity

[GHS Cat. Japan, base data]
(Ethyl carbamate)
cat. 2; mouse : MHLW risk assessment, 2011

STOT

STOT-single exposure

[cat.3 (drow./dizz.)]
[GHS Cat. Japan, base data]
(Ethyl carbamate)
narcotic effect (MHLW risk assessment Report, 2011)

STOT-repeated exposure

[cat.2]
[GHS Cat. Japan, base data]
(Ethyl carbamate)
hematopoietic system (MHLW risk assessment Report, 2011)

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax



12. Ecological Information

Ecotoxicity

Aquatic toxicity

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Ethyl carbamate)

Fish (fat head minnow) LC50=5240mg/L/96hr (Aquire, 2003)

Water solubility

(Ethyl carbamate)

48 g/100 ml (PHYSPROP_DB, 2005)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(Ethyl carbamate)

log Pow=-0.15 (ICSC, 2010)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No. or ID No.: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Carcinogenicity: cat.1, 1A, 1B

Ethyl carbamate

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

Ethyl carbamate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.



16. Other information**GHS classification and labelling**

Acute Tox. 4: H302 Harmful if swallowed

Acute Tox. 4: H312 Harmful in contact with skin

Muta. 2: H341 Suspected of causing genetic defects

Carc. 1B: H350 May cause cancer

Repr. 2: H361 Suspected of damaging fertility or the unborn child

STOT SE 3: H336 May cause drowsiness or dizziness

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2019).