



Safety Data Sheet

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

Product identifier:

Product name: Thiophene

SDS No. : 7780E-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****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 2

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Specific target organ toxicity – repeated exposure: Category 2(liver; brain)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Causes skin irritation

May cause damage to organs through prolonged or repeated exposure(liver; brain)

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT**Prevention**

Avoid release to the environment.

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Wash contaminated parts thoroughly after handling.

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

**Response**

In case of fire: Use appropriate media other than water for extinction.

Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water.

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

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

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

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

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

Ingredient name: Thiophene

Content (%): 98(min)

Chemical formula: C₄H₄S

Chemicals No, Japan: 9-810

CAS No.: 110-02-1

MW: 84.14

ECNO: 203-729-4

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

In case of fire, use foam, dry powder, CO2 to extinguish.

Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.

Bucket of water or tank of water

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.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

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.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures



Wear protective gloves/protective clothing/eye protection/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.

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: Liquid

Color: Colorless to pale yellow

Odor: Characteristic odor

Melting point/Freezing point: -38°C

Boiling point or initial boiling point: 84°C

Boiling range data is not available.

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

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 1.5 vol %

Upper explosion limit: 12.5 vol %

Flash point: (Thiophene)-1°C

Auto-ignition temperature: 395°C

Decomposition temperature data is not available.

pH data is not available.

Dynamic viscosity: 0.58mPas(30°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: None

n-Octanol/water partition coefficient: log Pow1.81

Vapor pressure: 5.3 kPa (12.5°C)

Density and/or relative density: 1.06



Relative vapor density (Air=1): 2.9

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

The vapour is heavier than air and may travel along the ground; distant ignition possible.

As a result of flow, agitation, etc., electrostatic charges can be generated.

Decomposes on heating and on burning. This produces toxic and irritating fumes (sulfur oxides). Reacts violently with oxidizing materials, including fuming nitric acid. (ICSC 1190)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Sulfur oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Thiophene)

human skin irritation(HSDB, 2003)

Serious eye damage/irritation data is not available.

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.2]

[GHS Cat. Japan, base data]

(Thiophene)

liver; brain (MHLW report, 2009)

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]



(Thiophene)
Crustacea (Daphnia magna) EC50=21mg/L/48hr (MOE Japan, 1996)
Water solubility
(Thiophene)
none (ICSC, 1997)
Persistence and degradability
(Thiophene)
Not degrade rapidly (Registered chemicals data check & review 1982)
Bioaccumulative potential
(Thiophene)
log Pow=1.81 (ICSC, 1997)
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

Avoid release to the environment (- if this is not the intended use).
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No.: 2414

Proper Shipping Name :

THIOPHENE

Class or division : 3

Packing group : II

ERG GUIDE No.: 130

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2414

Proper Shipping Name :

THIOPHENE

Class or division : 3

Packing group : II

IATA Dangerous Goods Regulations

UN No.: 2414

Proper Shipping Name :

THIOPHENE

Class or division : 3

Hazard labels : Flamm.liquid

Packing group : II

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no



15. Regulatory Information

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

US Federal Regulations

Chemicals listed in TSCA Inventory

Thiophene

Other regulatory information

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

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

Flam. Liq. 2: H225 Highly flammable liquid and vapor

Skin Irrit. 2: H315 Causes skin irritation

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

Aquatic Acute 3: H402 Harmful to aquatic life

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), 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 2018).