

Section 1. Product and Company Identification

**Product Name** Thiophene  
**CAS Number** 110-02-1

**Parchem - fine & specialty chemicals**  
**415 Huguenot Street**  
**New Rochelle, NY 10801**  
📞 (914) 654-6800 📠 (914) 654-6899  
🌐 [parchem.com](http://parchem.com) ✉️ [info@parchem.com](mailto:info@parchem.com)

EMERGENCY RESPONSE NUMBER  
CHEMTEL  
Toll Free US & Canada: 1 (800) 255-3924  
All other Origins: 1 (813) 248-0585  
Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**  
**CLP Classification - Regulation (EC) No 1272/2008**

**Physical hazards**

Flammable liquids - Category 2

**Health hazards**

Acute oral toxicity - Category 4

Acute Inhalation Toxicity - Vapors - Category 4

Serious Eye Damage/Eye Irritation - Category 2

**Environmental hazards**

Chronic aquatic toxicity - Category 3

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H225 - Highly flammable liquid and vapor  
H302 - Harmful if swallowed  
H332 - Harmful if inhaled  
H319 - Causes serious eye irritation  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking



P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P240 - Ground/bond container and receiving equipment

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Other hazards:** Lachrymator (substance which increases the flow of tears). Stench

### Section 3. Composition / Information on Ingredients

**Common Name** Thiophene  
**Formula** C<sub>4</sub>H<sub>4</sub>S  
**CAS Number** 110-02-1

COMPONENT	CAS NUMBER	CONCENTRATION
Thiophene	110-02-1	> 99.0%

### Section 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. Obtain medical attention.

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

**Ingestion:** Clean mouth with water and drink afterwards plenty of water.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Protection of First-aiders:** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination

**Most important symptoms and effects, both acute and delayed:** None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting.

### Section 5. Firefighting Measures

#### Extinguishing media

**Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

**Extinguishing media which must not be used for safety reasons:** No information available.

**Special hazards arising from the substance or mixture:** Flammable. 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 (CO<sub>2</sub>), Sulfur oxides, Sulfides.

**Advice for firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### Section 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental precautions:** Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

**Methods and material for containment and cleaning up:** Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

**Reference to other sections:** Refer to protective measures listed in Sections 8 and 13.

#### Section 7. Handling and Storage

**Precautions for safe handling:** Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

**Conditions for safe storage, including any incompatibilities:** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Flammables area. Keep container tightly closed in a dry and well-ventilated place.

#### Section 8. Exposure Controls / Personal Protection

##### Control parameters

##### Exposure limits

List source(s):

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Thiophene	TWA:20.0mg/m <sup>3</sup>	-	-	-	-
Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Thiophene	MAC:20mg/m <sup>3</sup>	-	-	-	-

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapors

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

**Derived No Effect Level (DNEL):** No information available

**Predicted No Effect Concentration (PNEC):** No information available

**Exposure controls**

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

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection:** Goggles (European standard - EN 166)

**Hand Protection:** Protective gloves

**Glove Material:** Nitrile rubber, Neoprene, Natural Rubber, PVC

**Skin and body protection:** Long sleeved clothing. Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitization effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

**Respiratory Protection:** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use:** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended Filter type:** Organic gases and vapors filter Type A Brown conforming to EN14387

**Small scale/Laboratory use:** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls:** Prevent product from entering drains.

Section 9. Physical and Chemical Properties

**Control parameters**

**Exposure limits**

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#### Section 10. Stability and Reactivity

**Reactivity:** None known, based on information available

**Chemical stability:** Stable under normal conditions.

#### Possibility of hazardous reactions

**Hazardous Polymerization:** Hazardous polymerization does not occur.

**Hazardous Reactions:** None under normal processing.

**Conditions to avoid:** Keep away from open flames, hot surfaces, and sources of ignition. Incompatible products.

**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides. Sulfides.

#### Section 11. Toxicological Information

#### Information on toxicological effects

##### Product Information

##### Acute Toxicity

**Oral:** Category 4

**Dermal:** No data available

**Inhalation:** Category 4

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Thiophene	LD50=1400 mg/kg(Rat)	-	-



**Skin corrosion/irritation:** No data available  
**Serious eye damage/irritation:** Category 2

**Respiratory or skin sensitization**

**Respiratory:** No data available  
**Skin:** No data available

**Germ Cell Mutagenicity:** No data available  
**Carcinogenicity:** No data available  
There are no known carcinogenic chemicals in this product

**Reproductive Toxicity:** No data available  
**STOT - Single Exposure:** No data available  
**STOT - Repeated Exposure:** No data available  
**Target Organs:** None known.  
**Aspiration Hazard:** No data available  
**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.

Section 12. Ecological Information

**Toxicity**

**Ecotoxicity effects:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. The product contains following substances, which are hazardous for the environment.

**Persistence and degradability:** Not readily biodegradable  
**Persistence:** Persistence is unlikely, based on information available.  
**Degradation in sewage treatment plant:** Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Bioaccumulative potential:** Bioaccumulation is unlikely  
**Mobility in soil:** The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

**Results of PBT and vPvB assessment:** No data available for assessment.

**Other adverse effects**

**Endocrine Disruptor Information:** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant:** This product does not contain any known or suspected substance

**Ozone Depletion Potential:** This product does not contain any known or suspected substance



Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**IMDG/IMO**

**UN number:** UN2414  
**UN proper shipping name:** Thiophene  
**Transport hazard class(es):** 3  
**Packing group:** II

**ADR**

**UN number:** 2414  
**UN proper shipping name:** Thiophene  
**Transport hazard class(es):** 3  
**Packing group:** II

**IATA**

**UN number:** UN2414  
**UN proper shipping name:** Thiophene  
**Transport hazard class(es):** 3  
**Packing group:** II  
**Environmental hazards:** No hazards identified  
**Special precautions for user:** No special precautions required  
**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable, packaged goods

Section 15. Regulatory Information

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

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Thiophene	203-729-4	-		X	X	-	X	X	X	X	X

**National Regulations**

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Thiophene	WGK3	





Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.  
Take note of Dir 94/33/EC on the protection of young people at work  
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Chemical Safety Assessment**

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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