1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3-Bromothiophene
Product Number : 106224
Brand : Aldrich
Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Combustible Liquid, Highly toxic by inhalation, Toxic by ingestion, Highly toxic by skin absorption, Skin sensitiser, Irritant

Other hazards which do not result in classification
Stench.

GHS Classification
Flammable liquids (Category 3)
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 1)
Acute toxicity, Dermal (Category 2)
Eye irritation (Category 2A)
Skin sensitization (Category 1)
Specific target organ toxicity - single exposure (Category 3)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H310 + H330 Fatal in contact with skin or if inhaled
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.
Precautionary statement(s)

P260  Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280  Wear protective gloves/ protective clothing.
P284  Wear respiratory protection.
P302 + P350  IF ON SKIN: Gently wash with plenty of soap and water.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310  Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 3
Flammability: 2
Physical hazards: 0

NFPA Rating

Health hazard: 3
Fire: 2
Reactivity Hazard: 0

Potential Health Effects

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms  : 3-Thienyl bromide
Formula  : C_4H_3BrS
Molecular Weight  : 163.04 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
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<tr>
<td>3-Bromothiophene</td>
<td></td>
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<tr>
<td>CAS-No.</td>
<td>872-31-1</td>
</tr>
<tr>
<td>EC-No.</td>
<td>212-821-3</td>
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4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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. Take victim immediately to hospital. 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. FIREFIGHTING 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 firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, Hydrogen bromide gas

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. 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. Discharge into the environment must be avoided.

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
Store in cool place. 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

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 ABEK (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.

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
Complete suit protecting against chemicals, 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
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form clear, liquid
**Colour**
- light brown

**Safety data**
- **pH**
  - no data available
- **Melting point/freezing point**
  - no data available
- **Boiling point**
  - 150 °C (302 °F) - lit.
- **Flash point**
  - 52 °C (126 °F) - closed cup
- **Ignition temperature**
  - no data available
- **Autoignition temperature**
  - no data available
- **Lower explosion limit**
  - no data available
- **Upper explosion limit**
  - no data available
- **Vapour pressure**
  - no data available
- **Density**
  - 1.74 g/cm³ at 25 °C (77 °F)
- **Water solubility**
  - no data available
- **Partition coefficient: n-octanol/water**
  - log Pow: 2.62
- **Relative vapour density**
  - no data available
- **Odour**
  - Stench.
- **Odour Threshold**
  - no data available
- **Evaporation rate**
  - no data available

10. STABILITY AND REACTIVITY

**Chemical stability**
- Stable under recommended storage conditions.

**Possibility of hazardous reactions**
- no data available

**Conditions to avoid**
- Heat, flames and sparks.

**Materials to avoid**
- Strong bases, Strong oxidizing agents, Strong reducing agents

**Hazardous decomposition products**
- Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, Hydrogen bromide gas
- Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
- **Oral LD50**
  - LD50 Oral - rat - 66 - 160 mg/kg
- **Inhalation LC50**
  - LC50 Inhalation - rat - 4 h - 0.25 - 1.0 mg/l
- **Dermal LD50**
  - LD50 Dermal - rabbit - 173 - 694 mg/kg
- **Other information on acute toxicity**
  - no data available
Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
May cause sensitization by skin contact.

Germ cell mutagenicity
no data available

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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

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

Signs and Symptoms of Exposure
Nausea, Headache, Vomiting, Inhalation may provoke the following symptoms:, Lung irritation, Difficulty in breathing

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 6.19 mg/l - 96.0 h

Persistence and degradability
According to the results of tests of biodegradability this product is not readily biodegradable.

Bioaccumulative potential
no data available

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

### 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

**DOT (US)**
- UN number: 2929  
  Class: 6.1 (3)  
  Packing group: II  
  Proper shipping name: Toxic liquids, flammable, organic, n.o.s. (3-Bromothiophene)
- Marine pollutant: No
- Poison Inhalation Hazard: No

**IMDG**
- UN number: 2929  
  Class: 6.1 (3)  
  Packing group: II  
  EMS-No: F-E, S-D
- Proper shipping name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (3-Bromothiophene)
- Marine pollutant: No

**IATA**
- UN number: 2929  
  Class: 6.1 (3)  
  Packing group: II
- Proper shipping name: Toxic liquid, flammable, organic, n.o.s. (3-Bromothiophene)

### 15. REGULATORY INFORMATION

**OSHA Hazards**
Combustible Liquid, Highly toxic by inhalation, Toxic by ingestion, Highly toxic by skin absorption, Skin sensitiser, Irritant

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Fire Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**
- 3-Bromothiophene  
  CAS-No. 872-31-1

**New Jersey Right To Know Components**
- 3-Bromothiophene  
  CAS-No. 872-31-1
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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