



MATERIAL SAFETY DATA SHEET

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Thiophene, benzene free, 99.5%

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Thiophene, benzene free, 99.5%

Catalog Numbers:

T085

Synonyms:

Company Identification:

LEONID CHEMICALS

62/A-2 2nd Stage, Industrial Suburb

Yeshwanthpur, Bangalore -22, INDIA

Ph- +91-80-23378354

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	110-02-1
Chemical Name	:	Thiophene
%	:	99.5%
EINECS#	:	203-729-4
Hazard Symbols	:	XN F
Risk Phrases	:	11 20/21/22 36

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes.

Potential Health Effects

Eye:

Causes eye irritation. Lachrymator (substance which increases the flow of tears).

Skin:

May cause skin irritation. Harmful if absorbed through the skin.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract.
May cause nausea and vomiting.

Inhalation:

Harmful if inhaled. May cause respiratory tract irritation.

Chronic:

Not available.



SECTION 4 - FIRST AID MEASURES

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Get medical aid. Wash mouth out with water.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

SECTION 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

SECTION 7 - HANDLING and STORAGE

Handling:

Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Use only in a chemical fume hood.

Storage:

Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid

Color: APHA: 15 max

Odor: stench

pH: Not available.

Vapor Pressure: 80 hPa @ 20 deg C

Viscosity: Not available.

Boiling Point: 84 deg C @ 760.00mm Hg

Freezing/Melting Point: -38 deg C

Autoignition Temperature: 395 deg C (743.00 deg F)

Flash Point: -9 deg C (15.80 deg F)

Explosion Limits, lower: 1.5 vol %

Explosion Limits, upper: 12.5 vol %

Decomposition Temperature: >850 deg C

Solubility in water: insoluble

Specific Gravity/Density: 1.0510g/cm³

Molecular Formula: C₄H₄S

Molecular Weight: 84.14

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources.

Incompatibilities with Other Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide, oxides of sulfur, carbon dioxide, hydrogen sulfide.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 110-02-1: XM7350000

LD50/LC50:

CAS# 110-02-1: Dermal, guinea pig: LD50 = >20 mL/kg; Inhalation, mouse: LC50 = 9500 mg/m³/2H; Oral, mouse: LD50 = 420 mg/kg; Oral, rat: LD50 = 1400 mg/kg.

Carcinogenicity:

Thiophene -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Water-Danger/Protection : WGK3Invertebrate toxicity :EC50, 30 min :
Photobact.phosphoreum 180 ppm Microtox test (Kaiser, K.L. Water
Pollut.Res.J.Can. 1991)

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

IATA

Shipping Name: THIOPHENE

Hazard Class: 3

UN Number: 2414

Packing Group: II

IMO

Shipping Name: THIOPHENE

Hazard Class: 3

UN Number: 2414

Packing Group: II

RID/ADR

Shipping Name: THIOPHENE

Hazard Class: 3

UN Number: 2414

Packing group: II

SECTION 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 11 Highly flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36 Irritating to eyes.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 36/37 Wear suitable protective clothing and gloves.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 110-02-1: 3

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 110-02-1 is listed on Canada's DSL List.

CAS# 110-02-1 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

US FEDERAL

TSCA

CAS# 110-02-1 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 6/02/1999 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.