

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Odor-Tech, LLC.
7591 Esler Field Road
Pineville, LA 71360

Thio and Fine Chemicals

Customer Service Telephone Number: (800) 628-4453
(Monday through Friday, 8:30 AM to 5:30 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: SPOTLEAK® 1013
Synonyms: Tetrahydrothiophene
Molecular formula: C4H8S
Chemical family: mercaptans
Molecular weight: 88.16 g/mol
Product use: Odour agents

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: Colourless to yellow.
Physical state: liquid
Odor: pungent

DANGER!
FLAMMABLE LIQUID AND VAPOR.
HARMFUL OR FATAL IF SWALLOWED.
CAN ENTER LUNGS AND CAUSE DAMAGE.
CAUSES SKIN BURNS.
CAUSES EYE IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
OBJECTIONABLE ODOR MAY CAUSE NAUSEA, HEADACHE OR DIZZINESS.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Corrosive to skin. Causes serious eye irritation. May cause irritation of respiratory tract. Objectionable odor may cause nausea, headache or dizziness. Aspiration hazard if swallowed - can enter lungs and cause damage.

Symptoms of aspiration may include increased breathing and heart rate, coughing and related signs of respiratory distress.

Skin:

No more than slightly toxic. Corrosive. (based on animal studies)

Inhalation:

Practically nontoxic. May cause respiratory tract irritation. (based on animal studies)

Eyes:

Severely irritating. (based on animal studies)

Ingestion:

Slightly toxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	OSHA Hazardous
Thiophene, tetrahydro-	110-01-0	100 %	Y

This material is classified as hazardous under Federal OSHA regulation.

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

4. FIRST AID MEASURES**Inhalation:**

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion:

If swallowed, DO NOT induce vomiting. Call a Poison Control Center immediately. If vomiting occurs, have person lean forward. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash point < 55 °F (< 13 °C) (Tag closed cup)

Auto-ignition temperature: 396 °F (202 °C)

Lower flammable limit (LFL): 1.1 %(V)

Upper flammable limit (UFL): 12.1 %(V)

Extinguishing media (suitable):

Dry chemical, water spray, carbon dioxide, foam

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Water may be ineffective.

Keep containers and surroundings cool with water spray.

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

Vapors may spread long distances and ignite.

When burned, the following hazardous products of combustion can occur:

hydrogen sulfide

sulfur oxides

Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Stop the leak if you can do so without risk. Ventilate area only if odor control is not an issue. Cover spill area with closed-cell foam to reduce odors (use of Aqueous Film Forming Foam (AFFF) with polymeric layer is acceptable). If foam is unavailable, absorb spill with liquid-binding material (e.g. diatomaceous earth, saw dust universal binder) and deodorize residue on ground with 3-10% hydrogen peroxide. Wash with water and recover it. If spill is contained within a large containment area, add 5% bleach solution (sodium hypochlorite) in a 50 parts bleach solution to one part product dilution ratio. Swimming pool chemicals (hypochlorite compounds) work effectively in deodorizing product. If these are applied to product, the crystals must be accompanied by sufficient water of dilution so that the considerable heat of reaction will be absorbed. Enzyme or bacteria based deodorizers are also acceptable for use. Do not allow to enter drains or waterways. Place waste materials into Department of Transportation (DOT)-approved drums for disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:

Keep away from heat, sparks and flames.
Do not taste or swallow.
Do not get in eyes, on skin, or on clothing.
Avoid breathing vapor or mist.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.
Container hazardous when empty.
Emptied container retains vapor and product residue.
Follow label warnings even after container is emptied.
RESIDUAL VAPORS MAY EXPLODE ON IGNITION.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.
Improper disposal or reuse of this container may be dangerous and/or illegal.

Storage

General information on storage conditions:

Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All storage containers, including drums, cylinders and IBCs, must be bonded and grounded during filling and emptying operations. This product should be stored in a closed container, away from direct sunlight, at ambient temperatures. Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes which pertain to the specific local conditions of storage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

Storage incompatibility – General:

Store separate from: Strong oxidizing agents

Acids (concentrated solutions)

Alkaline earth metals

Bases

Reducing agents

hydrogen peroxide

nitric acid

hypochlorites

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). Provide ventilation if necessary to control exposure levels below airborne exposure limits (see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection:

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing immediately and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Colourless to yellow.
Physical state:	liquid
Odor:	pungent
Odor threshold:	1 ppb
pH:	not determined
Density:	not determined
Specific Gravity (Relative density):	1.002
Bulk density:	not determined
Vapor pressure:	36 mmHg (32 °F (0 °C))
Relative vapor density:	3.04

Vapor density:	not determined
Boiling point/boiling range:	249.6 °F (120.9 °C)
Freezing point:	< -51 °F (< -46 °C)
Solubility in water:	68 °F (20 °C) insoluble
Solubility in other solvents: [qualitative and quantitative]	Soluble in: Alcohols Ethyl ether
Refractive index:	1.505 68 °F (20 °C)
Viscosity, dynamic:	0.57 mPa.s 68 °F (20 °C)
% Volatiles:	100 %
Molecular weight:	88.16 g/mol
Critical point:	Critical pressure: 41,853 mmHg Critical temperature: 583 °F (306 °C)

10. STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Materials to avoid:

- Reacts violently with :
Strong oxidizing agents
Acids
Bases
Reducing agents
Hydrogen peroxide
Nitric acid
Hypochlorites
Alkaline earth metals
Release of : sulphur dioxide

Conditions / hazards to avoid:

Keep away from heat and sources of ignition. To avoid thermal decomposition, do not overheat.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products :
Carbon oxides
sulfur oxides
hydrogen sulfide

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for Thiophene, tetrahydro- (110-01-0)

Acute toxicity

Oral:

Slightly toxic. (rat) LD50 = 1,850 mg/kg.

Dermal:

No more than slightly toxic. (rat) LD50 > 2,000 mg/kg.

Inhalation:

Practically nontoxic. (rat) 4 h LC50 = 22.6 mg/l.

Skin Irritation:

Severely irritating to corrosive. (rabbit) (4 h)

Eye Irritation:

Severely irritating. (rabbit)

Skin Sensitization:

Not a skin sensitizer. Guinea pig maximization test. (guinea pig) No skin allergy was observed

Repeated dose toxicity

Repeated exposure by inhalation administration to rat / affected organ(s): blood, upper respiratory tract / signs: changes in blood cell counts, respiratory irritation

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Developmental toxicity

Exposure during pregnancy. inhalation (rat) / No birth defects were observed. (at doses that produce effects in mothers)

Other information

Aspiration hazard

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

Data on this material and/or its components are summarized below.

Data for Thiophene, tetrahydro- (110-01-0)

Biodegradation:

Not readily biodegradable. (28 d) < 10 % / OECD Guideline 301 F

Octanol Water Partition Coefficient:

log Pow 1.8 (calculated)

Ecotoxicology

Data on this material and/or its components are summarized below.

Data for Thiophene, tetrahydro- (110-01-0)

Aquatic toxicity data:

No more than slightly toxic. Danio rerio (zebra fish) 96 h LC50 > 60 mg/l

Aquatic invertebrates:

No more than slightly toxic. Daphnia magna (Water flea) 48 h EC50 > 24 mg/l

Algae:

Slightly toxic. Pseudokirchneriella subcapitata 72 h EC50 = 90 mg/l

Microorganisms:

Practically nontoxic. Respiration inhibition / Activated sludge 3 h EC50 = 1,530 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number : 2412
Proper shipping name : Tetrahydrothiophene
Class : 3
Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : yes

International Maritime Dangerous Goods Code (IMDG)

UN Number : 2412
Proper shipping name : TETRAHYDROTHIOPHENE
Class : 3
Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : yes
Flash point : < 55 °F (< 13 °C) Tag closed cup

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	Conforms to
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 144)	DSL	All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	ENCS (JP)	Conforms to
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Conforms to
China. Inventory of Existing Chemical Substances	IECSC (CN)	Conforms to
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard, Fire Hazard

SARA Title III – Section 313 Toxic Chemicals:

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.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Reportable quantity</u>
Benzene	71-43-2	10 lbs

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed):

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.

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.

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.

United States – State Regulations

New Jersey Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Thiophene, tetrahydro-	110-01-0

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Benzene	71-43-2
Thiophene, tetrahydro-	110-01-0

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

<u>Chemical Name</u>	<u>CAS-No.</u>
Benzene	71-43-2

Pennsylvania Right to Know – Special Hazardous Substance(s)

<u>Chemical Name</u>	<u>CAS-No.</u>
Benzene	71-43-2

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

<u>Chemical Name</u>	<u>CAS-No.</u>
Benzene	71-43-2

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Chemical Name</u>	<u>CAS-No.</u>
Benzene	71-43-2
Benzene, methyl-	108-88-3

16. OTHER INFORMATION

Latest Revision(s):

Revised Section(s):	Updated Corporate Address Change and Rocky Mountain Poison Center Phone Number
Reference number:	000000035658
Date of Revision:	07/11/2011
Date Printed:	07/11/2011

SPOTLEAK® is a registered trademark of Arkema Inc.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.