

**MATERIAL SAFETY DATA SHEET**  
**4-KETO-4,5,6,7-TETRAHYDROTHIANAPHTHENE 97%**

**Section 1 - Chemical Product and Company Identification**

<b>MSDS Name:</b>	4-KETO-4,5,6,7-TETRAHYDROTHIANAPHTHENE 97%
<b>Catalog Numbers:</b>	7.18
<b>Synonyms:</b>	4-Oxo-4,5,6,7-tetrahydrobenzo[b]thiophene
Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Laboratory chemicals, Manufacture of substances
<b>Company Identification:</b>	Tau-Chem, Ltd. Nobelova 34, P.O. Box 29 836 05 Bratislava, Slovak Republic Phone: +421 2 44 452 252 Fax: +421 2 44 457 645
<b>POISON CENTER:</b>	National Toxicological Information Centre Limbová 5, 833 05 Bratislava,
<b>Emergency Numbers Slovakia:</b>	Phone: +421 2 54 774 166 Fax: +421 2 54 774 605

**Section 2 - Hazards Identification**

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity, Oral (Category 4)


Specific target organ toxicity – single exposure (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Harmful if swallowed.

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

**Label elements**

Pictogram	
Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
Precautionary statement(s)	
P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

**According to European Directive 67/548/EEC as amended**

Hazard symbol(s)



Hazard symbol(s)

Xn

Harmful.

R-phrases(s)

R22

Harmful if swallowed.

S-phrases(s)

S26

In case of contact with eyes rinse immediately with plenty of water and seek for medical advice.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection.

**Other hazards**

None

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
13414-95-4	4-KETO-4,5,6,7-TETRAHYDROTHIANAPHTHENE	97	236-510-7
<b>Classification</b>	Acute Tox. 4;STOT SE 3 H302 Xn; R22		

For the full text of the H-Statements mentioned in this Section, see Section 16.

### Section 4 - First Aid Measures

<b>General advice:</b>	Consult a physician. Show this safety data sheet to the doctor in attendance.
<b>If inhaled:</b>	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
<b>In case of skin contact:</b>	Wash off with soap and plenty of water. Consult a physician.
<b>In case eye contact:</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>If swallowed:</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### Section 5 - Fire Fighting Measures

<b>Suitable extinguishing media:</b>	Use water spray, alcohol-resistant foam, carbon dioxide, dry chemical or water jet.
<b>Special protective equipment for fire-fighters:</b>	Wear self contained apparatus breathing apparatus for fire fighting if necessary.

### Section 6 - Accidental Release Measures

<b>Personal precautions:</b>	Use personal protective equipment. Avoid breathing dust. Ensure adequate ventilation.
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<b>Environmental precautions:</b>	Do not let product enter drains.
<b>Methods and materials for containment and cleaning up:</b>	Pick up and arrange disposal without creating dust. Ensure adequate ventilation. Keep in suitable, closed containers for disposal.

## Section 7 - Handling and Storage

<b>Precautions for safe handling:</b>	Avoid contact with skin and eyes. Avoid inhalation of dust and aerosols. Keep container tightly sealed. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
<b>Conditions for safe storage:</b>	Store in a cool place. Keep containers tightly closed in a dry and well ventilated place.

## Section 8 - Exposure Controls, Personal Protection

### Personal protective equipment:

<b>Respiratory protection:</b>	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).
<b>Hand protection</b>	The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
<b>Eye protection:</b>	Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards as NIOSH (US) or EN 166 (EU)
<b>Skin and body protection:</b>	Impervious body protection according to the amount and concentration of the dangerous substance at the work place.
<b>Hygiene measures:</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Low melting solid or liquid after melting
<b>Colour:</b>	White to yellow
<b>Odour:</b>	Not available
<b>pH:</b>	Not available
<b>Melting Point:</b>	34 - 40°C – lit.
<b>Boiling Point:</b>	120°C / 10 mm Hg
<b>Freezing/Melting Point:</b>	Not available
<b>Autoignition Temperature:</b>	Not available
<b>Flash Point:</b>	110°C
<b>Explosion Limits: Lower:</b>	Not available
<b>Explosion Limits: Upper:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Solubility in water:</b>	Not available

**Molecular Formula:** C<sub>8</sub>H<sub>8</sub>OS  
**Molecular Weight:** 152.21 g/mol

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under recommended storage conditions.  
**Materials to Avoid:** Strong oxidizing agents.  
**Hazardous Decomposition Products** Carbon oxides, Sulphur oxides.

### Section 11 - Toxicological Information

**Acute toxicity** No data available  
**Skin corrosion/irritation** No data available  
**Serious eye damage/eye irritation** No data available  
**Respiratory or skin sensitization** No sensitizing effect known.  
**Germ cell mutagenicity** No data available  
**Carcinogenicity:** No data available  
IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
**RTECS#:** No data available  
**Reproductive toxicity:** No data available  
**Specific target organ toxicity – single exposure** No data available  
**Specific target organ toxicity – repeated exposure** No data available  
**Aspiration hazard** No data available  
**Potential health effect:**  
**Inhalation** May be harmful if inhaled.  
Causes respiratory tract irritation.  
**Ingestion** Harmful if swallowed.  
**Skin** May be harmful if absorbed through skin.  
May cause skin irritation.  
**Eyes** May cause eye irritation.  
**Signs and Symptoms of Exposure**  
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.  
**Additional Information**  
No data available

### Section 12 – Ecological Information

**Toxicity:** No data available  
**Persistence and degradability** No data available  
**Bioaccumulative potential** No data available  
**Mobility in soil** No data available

**PBT and vPvB assessment** No data available  
**Other adverse effects** No data available

### Section 13 - Disposal Considerations

**Product** Material may be burned in a chemical incinerator equipped with an afterburner and a scrubber. Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging** Dispose of as unused product.

### Section 14 - Transport Information

	<b>IATA</b>	<b>IMDG</b>	<b>RID/ADR</b>
<b>Shipping Name:</b>	Not dangerous goods	Not dangerous goods	Not dangerous goods
<b>Hazard Class:</b>			
<b>UN Number:</b>			
<b>Packing Group:</b>			

### Section 15 - Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

### Section 16 – Other Information

#### Text of H-code(s) and R-phrases mentioned in Section 3

Acute Tox.	Acute Toxicity.
STOT SE	Specific target organ toxicity – single exposure
H302	Harmful if swallowed.
Xn	Harmful.
R22	Harmful if swallowed.

**MSDS Creation Date:** 05/2/2009

**Revision #1:**23/11/2010

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Disclaimer:**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.