

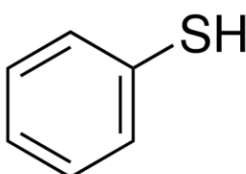
**CAS No: 108-98-5 MSDS**

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
 :  
 EC no : 203-635-3  
 CAS No : 108-98-5  
 Product code : 06283  
 Chemical structure :



Synonyms : Phenyl mercaptan / Benzenethiol

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.  
 107 Wode House Road, Jehangir Villa, Colaba  
 400005 Mumbai - INDIA  
 T +91 22 6663 6663 - F +91 22 6663 6699  
[info@lobachemie.com](mailto:info@lobachemie.com) - [www.lobachemie.com](http://www.lobachemie.com)

#### 1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226  
 Category 3  
 Acute toxicity (oral), H300  
 Category 1  
 Acute toxicity (dermal), H310  
 Category 1  
 Acute toxicity (inhal.), H330  
 Category 2  
 Serious eye damage/eye irritation, Category 1 H318

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

|  |      |
|--|------|
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 |
| Specific target organ toxicity — Single exposure, Category 2                               | H371 |
| Specific target organ toxicity — Repeated exposure, Category 2                             | H373 |
| Hazardous to the aquatic environment — Chronic Hazard, Category 1                          | H410 |

Full text of classification categories and H statements : see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

T+; R26  
T; R24/25  
C; R34  
R10

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

GHS06

GHS08

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H226 - Flammable liquid and vapour  
H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled  
H318 - Causes serious eye damage  
H335 - May cause respiratory irritation  
H371 - May cause damage to organs  
H373 - May cause damage to organs through prolonged or repeated exposure  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P264 - Wash ... thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P284 - [In case of inadequate ventilation] wear respiratory protection  
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician  
P302+P352 - IF ON SKIN: 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

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : THIOPHENOL FOR SYNTHESIS  
CAS No : 108-98-5  
EC no : 203-635-3

Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Specific measures (see ... on this label). Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see ... on this label). Do NOT induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May cause damage to organs. May cause damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : Fatal if inhaled. May cause respiratory irritation.

Symptoms/injuries after skin contact : Fatal in contact with skin.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Fatal if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop release.

#### 6.2. Environmental precautions

Very toxic to aquatic life.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment. Comply with applicable regulations.

Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place. Store in a well-ventilated place.

Incompatible materials : Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### 8.2. Exposure controls

|                          |                                     |
|--------------------------|-------------------------------------|
| Hand protection          | : protective gloves                 |
| Eye protection           | : Chemical goggles or face shield   |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection   | : Wear respiratory protection       |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|  |                               |
|--|-------------------------------|
| Physical state                             | : Liquid                      |
| Molecular mass                             | : 110.18 g/mol                |
| Colour                                     | : Clear Yellow.               |
| Odour                                      | : unpleasant.                 |
| Odour threshold                            | : No data available           |
| pH   | : No data available           |
| Relative evaporation rate (butylacetate=1) | : No data available           |
| Melting point                              | : -15 °C                      |
| Freezing point                             | : No data available           |
| Boiling point                              | : 169 °C                      |
| Flash point                                | : 50 °C                       |
| Auto-ignition temperature                  | : 450 °C                      |
| Decomposition temperature                  | : No data available           |
| Flammability (solid, gas)                  | : Flammable liquid and vapour |
| Vapour pressure                            | : 1.9 hPa at 20 °C            |
| Relative vapour density at 20 °C           | : 3.8                         |
| Relative density                           | : No data available           |
| Density                                    | : 1.073 g/cm <sup>3</sup>     |
| Solubility                                 | : Water: Insoluble in water   |
| Log Pow                                    | : No data available           |
| Viscosity, kinematic                       | : No data available           |
| Viscosity, dynamic                         | : No data available           |
| Explosive properties                       | : No data available           |
| Oxidising properties                       | : No data available           |
| Explosive limits                           | : No data available           |

#### 9.2. Other information

No additional information available

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

#### 10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Dermal: Fatal in contact with skin. Inhalation: Fatal if inhaled.

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Causes serious eye damage.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : May cause respiratory irritation. May cause damage to organs.

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Toxic if swallowed. Toxic in contact with skin.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Hazardous waste due to toxicity.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 2337

UN-No. (IMDG) : 2337

UN-No.(IATA) : 2337

UN-No.(ADN) : 2337

UN-No. (RID) : 2337

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : PHENYL MERCAPTAN

Proper Shipping Name (IMDG) : PHENYL MERCAPTAN

Proper Shipping Name (IATA) : PHENYL MERCAPTAN

Proper Shipping Name (ADN) : PHENYL MERCAPTAN

Proper Shipping Name (RID) : PHENYL MERCAPTAN

Transport document description (ADR) : UN 2337 PHENYL MERCAPTAN, 6.1 (3), I, (C/D), ENVIRONMENTALLY HAZARDOUS

Transport document description (IMDG) : UN 2337 PHENYL MERCAPTAN, 6.1 (3), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (50°C c.c.)

Transport document description (IATA) : UN 2337 PHENYL MERCAPTAN, 6.1, I, ENVIRONMENTALLY HAZARDOUS

Transport document description (ADN) : UN 2337 PHENYL MERCAPTAN, 6.1 (3), I, ENVIRONMENTALLY HAZARDOUS

Transport document description (RID) : UN 2337 PHENYL MERCAPTAN, 6.1 (3), I, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 6.1 (3)

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

Danger labels (ADR) : 6.1, 3



### IMDG

Transport hazard class(es) (IMDG) : 6.1 (3)

Danger labels (IMDG) : 6.1, 3



### IATA

Transport hazard class(es) (IATA) : 6.1 (3)

Hazard labels (IATA) : 6.1, 3



### ADN

Transport hazard class(es) (ADN) : 6.1 (3)

Danger labels (ADN) : 6.1, 3



### RID

Transport hazard class(es) (RID) : 6.1 (3)

Danger labels (RID) : 6.1, 3



## 14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (ADN) : I

Packing group (RID) : I

## 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes




# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : TF1  
Special provision (ADR) : 354  
Limited quantities (ADR) : 0  
Excepted quantities (ADR) : E0  
Packing instructions (ADR) : P602  
Mixed packing provisions (ADR) : MP8, MP17  
Portable tank and bulk container instructions (ADR) : T20  
Portable tank and bulk container special provisions (ADR) : TP2, TP35  
Tank code (ADR) : L10CH  
Tank special provisions (ADR) : TU14, TU15, TE19, TE21  
Vehicle for tank carriage : FL  
Transport category (ADR) : 1  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV1, CV13, CV28  
Special provisions for carriage - Operation (ADR) : S2, S9, S14  
Hazard identification number (Kemler No.) : 663  
Orange plates : 

Tunnel restriction code (ADR) : C/D  
EAC code : 3WE  
APP code : A(fl)

#### - Transport by sea

Special provision (IMDG) : 354  
Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P602  
Tank instructions (IMDG) : T20  
Tank special provisions (IMDG) : TP2, TP13, TP35  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : D  
Stowage and handling (IMDG) : SW2  
Segregation (IMDG) : SG35  
Flash point (IMDG) : 50°C c.c.  
MFAG-No : 131

#### - Air transport

PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : Forbidden  
PCA max net quantity (IATA) : Forbidden  
CAO packing instructions (IATA) : Forbidden  
CAO max net quantity (IATA) : Forbidden

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

ERG code (IATA) : 6F

### - Inland waterway transport

Classification code (ADN) : TF1  
Special provisions (ADN) : 354, 802  
Limited quantities (ADN) : 0  
Excepted quantities (ADN) : E0  
Equipment required (ADN) : PP, EP, EX, TOX, A  
Ventilation (ADN) : VE01, VE02  
Number of blue cones/lights (ADN) : 2

### - Rail transport

Classification code (RID) : TF1  
Special provision (RID) : 354  
Limited quantities (RID) : 0  
Excepted quantities (RID) : E0  
Packing instructions (RID) : P602  
Mixed packing provisions (RID) : MP8, MP17  
Portable tank and bulk container instructions (RID) : T20  
Portable tank and bulk container special provisions (RID) : TP2, TP35  
Tank codes for RID tanks (RID) : L10CH  
Special provisions for RID tanks (RID) : TU14, TU15, TU38, TE21, TE22  
Transport category (RID) : 1  
Special provisions for carriage – Loading and unloading (RID) : CW13, CW28, CW31  
Hazard identification number (RID) : 663

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

THIOPHENOL FOR SYNTHESIS is not on the REACH Candidate List

THIOPHENOL FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 144)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

# THIOPHENOL FOR SYNTHESIS

## Safety Data Sheet

### Denmark

|                                   |   |
|-----------------------------------|---|
| Class for fire hazard             | : Class II-1  |
| Store unit                        | : 5 liter   |
| Classification remarks            | : R10 <H226;H300+H310+H330;H318;H335;H371;H373;H410>; Emergency management guidelines for the storage of flammable liquids must be followed   |
| Recommendations Danish Regulation | : Young people below the age of 18 years are not allowed to use the product<br>Pregnant/breastfeeding women working with the product must not be in direct contact with the product |

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

|                           |  |
|---------------------------|--|
| Acute Tox. 1 (Dermal)     | Acute toxicity (dermal), Category 1  |
| Acute Tox. 1 (Oral)       | Acute toxicity (oral), Category 1  |
| Acute Tox. 2 (Inhalation) | Acute toxicity (inhal.), Category 2  |
| Aquatic Chronic 1         | Hazardous to the aquatic environment — Chronic Hazard, Category 1                          |
| Eye Dam. 1                | Serious eye damage/eye irritation, Category 1  |
| Flam. Liq. 3              | Flammable liquids, Category 3  |
| STOT RE 2                 | Specific target organ toxicity — Repeated exposure, Category 2                             |
| STOT SE 2                 | Specific target organ toxicity — Single exposure, Category 2                               |
| STOT SE 3                 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H226                      | Flammable liquid and vapour  |
| H300                      | Fatal if swallowed   |
| H310                      | Fatal in contact with skin   |
| H318                      | Causes serious eye damage  |
| H330                      | Fatal if inhaled   |
| H335                      | May cause respiratory irritation   |
| H371                      | May cause damage to organs   |
| H373                      | May cause damage to organs through prolonged or repeated exposure                          |
| H410                      | Very toxic to aquatic life with long lasting effects                                       |
| R10                       | Flammable  |
| R24/25                    | Toxic in contact with skin and if swallowed  |
| R26                       | Very toxic by inhalation   |
| R34                       | Causes burns   |
| C                         | Corrosive  |
| T                         | Toxic  |
| T+                        | Very toxic   |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*