



# TCI AMERICA

## SAFETY DATA SHEET

Revision number: 2  
Revision date: 10/06/2014

### 1. IDENTIFICATION

**Product name:** Captopril  
**Product code:** C1580

**Product use:** For laboratory research purposes.  
**Restrictions on use:** Not for drug or household use.

**Company:**  
TCI America  
9211 N. Harborside Street  
Portland, OR 97203 U.S.A.  
**Telephone:**  
+1-800-423-8616 / +1-503-283-1681  
**Fax:**  
+1-888-520-1075 / +1-503-283-1987  
**e-mail:**  
sales-US@TCIchemicals.com  
www.TCIchemicals.com

**Emergency telephone number:**  
**Chemical Emergencies:**  
TCI America (8:00am - 5:00pm) PST  
+1-503-286-7624  
**Transportation Emergencies:**  
Chemtrec 24-Hour  
+1-800-424-9300 (U.S.A.)  
+1-703-527-3887 (International)  
**Responsible department:**  
TCI America  
Environmental Health Safety and Security  
+1- 503-286-7624

### 2. HAZARD(S) IDENTIFICATION

**OSHA Haz Com: CFR 1910.1200:** Not classifiable

**Signal word:** None

**Hazard Statement(s):** None

**Pictogram(s) or Symbol(s):** None

**Precautionary Statement(s):** None

**Hazards not otherwise classified: [HNOC]** May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Mixture:** Substance  
**Components:** Captopril  
**Percent:** >98.0%(HPLC)(T)  
**CAS Number:** 62571-86-2  
**Molecular Weight:** 217.28  
**Chemical Formula:** C<sub>9</sub>H<sub>15</sub>NO<sub>3</sub>S  
**Synonyms:** (S)-(-)-1-(3-Mercapto-2-methyl-1-oxopropyl)-L-proline , (S)-(-)-1-(3-Mercapto-2-methylpropionyl)-L-proline

### 4. FIRST-AID MEASURES

**Inhalation:** If a person breathes large amounts of this chemical, move the exposed person to fresh air at once.  
**Skin contact:** If a person feels unwell or symptoms of skin irritation appear, consult a physician.  
**Eye contact:** If this chemical contacts the eyes, promptly wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper eyelids.  
**Ingestion:** If swallowed, seek medical advice immediately and show the container or label.

#### Symptoms/effects:

**Acute:** No data available  
**Delayed:** No data available

**4. FIRST-AID MEASURES**

**Immediate medical attention:** Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Use extinguishing media suitable for surrounding materials.

**Specific hazards arising from the chemical**

**Hazardous combustion products:** These products include: Carbon oxides Nitrogen oxides Silicates

**Other specific hazards:** Closed containers may explode from heat of a fire.

**Special precautions for fire-fighters:**

Not available

**Special protective equipment for fire-fighters:**

Not available

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8).

**Personal protective equipment:** Safety glasses.

**Emergency procedures:** In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution.

**Methods and materials for containment and cleaning up:**

Dike far ahead of liquid spill for later disposal.

**Environmental precautions:**

Prevent entry into sewers, basements or confined areas.

**7. HANDLING AND STORAGE**

**Precautions for safe handling:** Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

**Conditions for safe storage:** Keep container tightly closed in a dry and well-ventilated place. Store under inert gas (e.g. Argon).

**Storage incompatibilities:** Store away from oxidizing agents

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure limits:** No data available

**Appropriate engineering controls:**

Follow safe industrial engineering/laboratory practices when handling any chemical.

**Personal protective equipment**

**Respiratory protection:** Be sure to use a MSHA/NIOSH approved respirator or equivalent.

**Hand protection:** Wear protective gloves.

**Eye protection:** Safety glasses.

**Skin and body protection:** Lab coat.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state (20°C):** Solid

**Form:** Crystal - Powder

**Color:** White - Almost white

**Odor:** No data available

**Odor threshold:** No data available

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|  |                   |  |                   |
|--|-------------------|--|-------------------|
| <b>Melting point/freezing point:</b>                                   | 106°C (223°F)     | <b>pH:</b>                                       | No data available |
| <b>Boiling point/range:</b>  | No data available | <b>Vapor pressure:</b>                           | No data available |
| <b>Decomposition temperature:</b>                                      | No data available | <b>Vapor density:</b>                            | No data available |
| <b>Relative density:</b>   | No data available | <b>Dynamic Viscosity:</b>                        | No data available |
| <b>Kinematic Viscosity:</b>  | No data available |  |                   |
| <b>Partition coefficient:<br/>n-octanol/water (log P<sub>ow</sub>)</b> | No data available | <b>Evaporation rate:<br/>(Butyl Acetate = 1)</b> | No data available |
| <b>Flash point:</b>  | No data available | <b>Autoignition temperature:</b>                 | No data available |
| <b>Flammability (solid, gas):</b>                                      | No data available | <b>Flammability or explosive limits:</b>         |                   |
|  |                   | <b>Lower:</b>                                    | No data available |
|  |                   | <b>Upper:</b>                                    | No data available |

Solubility(ies):

**10. STABILITY AND REACTIVITY**

|  |  |
|--|--|
| <b>Reactivity:</b>                         | Not Available.                             |
| <b>Chemical Stability:</b>                 | Air sensitive.                             |
| <b>Possibility of Hazardous Reactions:</b> | No hazardous reactivity has been reported. |
| <b>Conditions to avoid:</b>                | Air sensitive. Exposure to air.            |
| <b>Incompatible materials:</b>             | Strong oxidizing agents                    |
| <b>Hazardous Decomposition Products:</b>   | No data available                          |

**11. TOXICOLOGICAL INFORMATION**

RTECS Number: UY0550000

**Acute Toxicity:**

orl-rat LD50:4245 mg/kg

orl-wmn TDLo:10 mg/kg

**Skin corrosion/irritation:**

No data available

**Serious eye damage/irritation:**

No data available

**Respiratory or skin sensitization:**

No data available

**Germ cell mutagenicity:**

No data available

**Carcinogenicity:**

No data available

**IARC:** No data available**NTP:** No data available**OSHA:** No data available**Reproductive toxicity:**

No data available

**Routes of Exposure:**

Inhalation, Eye contact, Ingestion, Skin contact.

**Symptoms related to exposure:**

Overexposure may result in serious illness or death.

**Potential Health Effects:**

May be harmful if inhaled or ingested. Overexposure may result in serious illness or death.

**Target organ(s):**

No data available

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Fish:**

No data available

**Crustacea:**

No data available

**12. ECOLOGICAL INFORMATION**

|  |                   |
|--|-------------------|
| Algae:   | No data available |
| Persistence and degradability:                                   | No data available |
| Bioaccumulative potential (BCF):                                 | No data available |
| Mobility in soil:  | No data available |
| Partition coefficient:<br>n-octanol/water (log P <sub>ow</sub> ) | No data available |
| Soil adsorption (K <sub>oc</sub> ):                              | No data available |
| Henry's Law:<br>constant (PaM <sup>3</sup> /mol)                 | No data available |

**13. DISPOSAL CONSIDERATIONS**

|                        |   |
|------------------------|---|
| Disposal of product:   | Recycle to process if possible.   |
| Disposal of container: | Dispose of as unused product.   |
| Other considerations:  | Observe all federal, state and local regulations when disposing of the substance. |

**14. TRANSPORT INFORMATION**

|                 |                                   |
|-----------------|-----------------------------------|
| <u>DOT (US)</u> | Non-hazardous for transportation. |
| <u>IATA</u>     | Non-hazardous for transportation. |
| <u>IMDG</u>     | Non-hazardous for transportation. |

**15. REGULATORY INFORMATION****Toxic Substance Control Act (TSCA 8b.):**

This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list:

- (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec.  
(ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on a SDS sheet.

**US Federal Regulations****CERCLA Hazardous substance and Reportable Quantity:**

|           |            |
|-----------|------------|
| SARA 313: | Not Listed |
| SARA 302: | Not Listed |

**State Regulations****State Right-to-Know**

|                            |            |
|----------------------------|------------|
| Massachusetts              | Not Listed |
| New Jersey                 | Not Listed |
| Pennsylvania               | Not Listed |
| California Proposition 65: | Not Listed |

**Other Information****NFPA Rating:**

|               |   |
|---------------|---|
| Health:       | 2 |
| Flammability: | 0 |
| Instability:  | 0 |

**HMIS Classification:**

|               |   |
|---------------|---|
| Health:       | 2 |
| Flammability: | 0 |
| Physical:     | 0 |

**International Inventories**

|                     |                    |
|---------------------|--------------------|
| WHMIS hazard class: | No data available. |
| EC-No:              | 263-607-1          |

**16. OTHER INFORMATION**

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**16. OTHER INFORMATION**

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.