



TCI AMERICA

SAFETY DATA SHEET

Revision number: 1
Revision date: 10/06/2014

1. IDENTIFICATION

Product name: Enalapril Maleate
Product code: E1010

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

Company:
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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.

Supplementary Information: While this material is not classified as hazardous under OSHA, this SDS contains valuable information critical to safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance
Components: Enalapril Maleate
Percent: >98.0%(HPLC)(T)
CAS Number: 76095-16-4
Molecular Weight: 492.53
Chemical Formula: C₂₀H₂₈N₂O₅·C₄H₄O₄
Synonyms: 1-[N-[(S)-1-Ethoxycarbonyl-3-phenylpropyl]-L-alanyl]-L-proline Maleate

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: No information available.
Ingestion: Not applicable.

Symptoms/effects:

Acute: No data available

4. FIRST-AID MEASURES

Delayed: No data available

Immediate medical attention: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Not available

Specific hazards arising from the chemical

Hazardous combustion products: None

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: Not available

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place.

Storage incompatibilities: Store away from oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No data available

Appropriate engineering controls:

Not available.

Personal protective equipment

Respiratory protection: Not Available.

Hand protection: Not Available.

Eye protection: Not Available.

Skin and body protection: Not Available.

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

Melting point/freezing point:	144°C (dec.) (291°F)	pH:	No data available
Boiling point/range:	No data available	Vapor pressure:	No data available
Decomposition temperature:	No data available	Vapor density:	No data available
Relative density:	No data available	Dynamic Viscosity:	No data available
Kinematic Viscosity:	No data available	Evaporation rate:	No data available
Partition coefficient: n-octanol/water (log P_{ow})	No data available	(Butyl Acetate = 1)	
Flash point:	No data available	Autoignition temperature:	No data available
Flammability (solid, gas):	No data available	Flammability or explosive limits:	
		Lower:	No data available
		Upper:	No data available

Solubility(ies):

Water: Slightly soluble (0.025g/mL, 25°C)
Very soluble: Methanol
Soluble: Ethanol
Very slightly soluble: Acetonitrile
Insoluble: Ether

10. STABILITY AND REACTIVITY

Reactivity:	Not Available.
Chemical Stability:	Stable under recommended storage conditions. (See Section 7)
Possibility of Hazardous Reactions:	No hazardous reactivity has been reported.
Conditions to avoid:	Avoid excessive heat and light.
Incompatible materials:	Oxidizing agents
Hazardous Decomposition Products:	No data available

11. TOXICOLOGICAL INFORMATION

RTECS Number: TW3666000

Acute Toxicity:

orl-rat LD50:2973 mg/kg

scu-rat LD50:1418 mg/kg

ivn-rat LD50:849 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:

orl-wmn TDLo:6800 ug/kg(32-34W preg)

orl-rat TDLo:280 mg/kg(15-22D preg/20D post)

Routes of Exposure:

Inhalation, Eye contact, Ingestion.

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
Algae:	No data available

Persistence and degradability:	No data available
Bioaccumulative potential (BCF):	No data available
Mobility in soil:	No data available
Partition coefficient:	No data available
n-octanol/water (log P_{ow})	
Soil adsorption (K_{oc}):	No data available
Henry's Law:	No data available
constant (PaM³/mol)	

13. DISPOSAL CONSIDERATIONS

Disposal of product:	Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261.
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

DOT (US)	Non-hazardous for transportation.
IATA	Non-hazardous for transportation.
IMDG	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:	0
Flammability:	0
Instability:	0

HMIS Classification:

Health:	0
Flammability:	0
Physical:	0

15. REGULATORY INFORMATION**International Inventories**

WHMIS hazard class:	No data available.
Canada: DSL	On DSL
EC-No:	278-375-7

16. OTHER INFORMATION**Revision date:** 10/06/2014**Revision number:** 1

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.