

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	Captopril
Product #:	C-2555
Synonyms:	SA 333; SQ 14,225; 1-[(2S)-3-mercapto-2-methyl-1-oxopropyl]-L-proline
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Captopril	62571-86-2	263-607-1	≥98%

Section 3: Hazards Identification

Symbols	
----------------	--

HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
3		0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
3	0	0

Section 4: First Aid Measures

General Overview:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Inhalation:	Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

Skin:	Immediately wash with water and soap and rinse thoroughly.
Eyes:	Rinse opened eyes for several minutes under running water. Then consult a doctor.
Ingestion:	Immediately call a doctor.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Product is not flammable
Extinguishing Media:	Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	Mouth respiratory protective device.
Flash Point:	No data available

Section 6: Accidental Release Measures

Personal Precautions:	Wear protective equipment. Keep unprotected persons away.
Environmental Precautions:	Do not allow to enter sewers/surface or ground water.
Methods for Clean-up:	Use neutralizing agent. Dispose contaminated material as waste according to Section 13. Ensure adequate ventilation.

SECTION 7: Handling & Storage

Storage:	Thorough dedusting. Ensure good ventilation/exhaustion at the workplace.
Handling:	See Section 8.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	
--------------------------------	---

	In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Skin and Body:	  <p>Protective gloves and lab coat.</p>
Eyes:	 <p>Tightly sealed goggles</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Follow standard good industrial hygiene.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Solid
Formula	$C_9H_{15}NO_3S$
Molecular Wt.	217.3
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	DMF (30 mg/mL), DMSO (30 mg/mL), Ethanol (30 mg/mL), PBS [pH 7.2] (3 mg/mL)
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides
Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No further relevant information available.

SECTION 11: Toxicological Information

RTECS#:	UY0550000
ACUTE Toxicity:	<p>Oral LD50: 4,245 mg/kg (rat) LDLO: 2,500 µg/kg/3D intermittent (man) TDLO: 10 mg/kg (woman) Subcutaneous LD50: >2,400 mg/kg (mouse), >600 mg/kg (rat) Intravenous LD50: 663 mg/kg (mouse), 554 mg/kg (rat)</p> <p>Primary irritant effect:</p> <ul style="list-style-type: none"> · on the skin: Irritant to skin and mucous membranes. · on the eye: Strong irritant with the danger of severe eye injury.
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>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.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Mobility:	No data available
Persistence and degradability:	No data available

Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	No data available

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	N/A
ADR / RID (LAND):	Not regulated
DOT regulations:	Not regulated
IMDG/IMO (SEA):	Not regulated
IATA/DGR (AIR):	Not regulated
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	Danger! H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled. H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360 May damage fertility or the unborn child.
Risk Phrases:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/fume/gas/mist/vapors/spray P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Safety Phrases:	P301+P312 If swallowed: Call a poison center/doctor if you feel unwell. P302+P352 If on skin: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

	<p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a poison center/doctor.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P321 Specific treatment (see on this label).</p> <p>P330 Rinse mouth.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
EU Regulations:	N/A
US Regulations:	<p>TSCA: Not listed</p> <p>California Proposition 65: No products were found</p>
U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Toxic to reproduction (Cat. 1A); Eye damage (Cat. 1); Acute toxicity - oral, dermal, inhalation (Cat. 4); Skin irritation (Cat. 2); Sensitization - skin (Cat. 1)</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*