



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Copper (II) Selenide**

PRODUCT NUMBER: 1585

CAS NUMBER: 1317-41-5

### MANUFACTURER:

Prochem, Inc.  
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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

H301+H331	Toxic if swallowed or if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

### Precautionary Phrases

P260	Do not breathe dust or mist.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### HMIS CLASSIFICATION:

Health: 2      Fire: 0      Reactivity Hazard: 1

### NFPA RATING:

Health: 2      Flammability: 0      Reactivity Hazard: 1

**EYE CONTACT:** Causes irritation of the eyes.

**SKIN CONTACT:** Causes irritation of the skin.

**INHALATION:** Causes irritation to the respiratory tract and acute selenium poisoning.

**INGESTION:** Harmful if swallowed. May cause gastrointestinal disturbances and selenium and copper toxicity.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: CuSe

Molecular Weight: 142.51

CHEMICAL NAME	CAS#	%
Copper (II) Selenide	1317-41-5	100

### SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with soap and plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

**INGESTION:** Give 1-2 glasses of mild or water and induce vomiting if conscious. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

### SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Not available

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Product does not present explosion hazards.

**EXTINGUISHING MEDIUM:** Carbon dioxide, extinguishing powder, or water spray. Fight large fires with water spray or alcohol resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Copper oxides and selenium oxides

### SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Sweep up and place in suitable container for proper disposal.

### SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Use with adequate ventilation. Avoid formation of dusts and aerosols.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry, and well-ventilated area.

### SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity
Copper Selenide (As copper)	1 mg/m <sup>3</sup>	REL	NIOSH
(As copper)	*1 mg/m <sup>3</sup> **0.2 mg/m <sup>3</sup>	TLV	ACGIH
(As copper)	*1 mg/m <sup>3</sup> **0.1 mg/m <sup>3</sup>	PEL	OSHA
(As copper)	*1 mg/m <sup>3</sup> **0.1 mg/m <sup>3</sup>	REL	NIOSH
(As selenium)	0.2 mg/m <sup>3</sup>	TLV	ACGIH
(As selenium)	0.2 mg/m <sup>3</sup>	PEL	OSHA

\*As copper dust, mist

\*\*As copper fume

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

**EYE PROTECTION:** Wear chemical safety glasses or goggles and face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Dark blue to black powder and pieces

**ODOR:** None

**MOLECULAR WEIGHT:** 142.51

**BOILING POINT:** No data available

**MELTING POINT:** 550°C

**SPECIFIC GRAVITY:** 5.99 gm/ml

**VAPOR DENSITY:** No data available

**SOLUBILITY:** Insoluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** No data available

**INCOMPATIBILITY:** No data available

**DECOMPOSITION PRODUCTS:** Copper oxides and selenium oxides

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** Not available

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRAOGENIC EFFECTS:** Not available

**CHRONIC TOXICITY:** Selenium may cause amyotrophic lateral sclerosis, bronchial irritation, gastrointestinal distress, vasopharyngeal irritation, garlic odor on breath and sweat, metallic taste, pallor, irritability, excessive fatigue, loss of fingernails and hard, pulmonary edema, anemia and weight loss. Copper compounds may be irritating to the skin, eyes, and respiratory tract. They may cause metal fume fever, hemolysis of the red blood cells and injury to the liver, lungs, kidneys, and pancreas. Ingestion may also cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma, and death.

**RTECS:** No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

Do not allow material to reach ground water, watercourse, or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Very toxic for aquatic organisms - may cause long lasting harmful effects to aquatic life. Also poisonous for fish and plankton in water bodies.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## SECTION 14 TRANSPORTATION DATA

**DOT:** UN3077  
Environmentally hazardous substances, solid, n.o.s.  
(copper (II) selenide)  
CLASS 9  
PG III

**IATA:** UN3077  
Environmentally hazardous substance, solid, n.o.s.  
copper (II) selenide)  
CLASS 9  
PG III

Marine Pollutant: No

## SECTION 15 REGULATORY INFORMATION

**TSCA:** Listed in the TSCA inventory

**SARA 302/304:** Not Listed

**SARA 311/312:** Not Listed

**SARA (TITLE 313):** Copper (II) Selenide

**CALIFORNIA PROP. 65:** Not Listed

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:** No components are subject to the Massachusetts Right to Know Act.

**NEW JERSEY RIGHT TO KNOW COMPONENTS:** No components are subject to the New Jersey Right to Know Act.

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:** No components are subject to the Pennsylvania Right to Know Act.

## SECTION 16 OTHER INFORMATION

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE PREPARED:** 02/15

**SDS DEPT.**