

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Fehling's Solution A  
Copper Sulfate Solution

**Product Number:** T7202000

**Other Identifying Product Numbers:** C748B83, C748B84

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Thomas Scientific

**Address:** 1654 High Hill Road  
Swedesboro, NJ 08085 USA

**Telephone:** 800-345-2100

#### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard	
		Statement	Precautionary Statements
Hazardous to the Aquatic Environment (Acute)	Category 1	H400	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 1	H400	P273, P501

#### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Warning**

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### Hazard Statements:

Hazard Number	Hazard Statement
H400	Very toxic to aquatic life.

### Precautionary Statements:

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

### 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H <sub>2</sub> O	18.01 g/mol	7732-18-5	93.34%
Copper Sulfate Pentahydrate	CuSO <sub>4</sub> ·5H <sub>2</sub> O	249.68 g/mol	7758-99-8	6.66%

## SECTION 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** No action required to be taken. If necessary, rinse eyes with water.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** No action required to be taken. If necessary, wash areas of contact with water.

**Ingestion:** No action required to be taken. If necessary, dilute with water.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

May cause mild irritation to areas of contact.

### 4.3. Medical Attention or Special Treatment Needed

Not expected to require special treatment.

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### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Not considered to be a fire or explosion hazard.

#### 5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

#### 5.3. Special Protective Equipment for Firefighters

Wear protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

### SECTION 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

#### 6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

### SECTION 7: Handling and Storage

#### 7.1. Precautions for Safe Handling and Storage Conditions

Protect from freezing and physical damage.

### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Copper Sulfate Pentahydrate (7758-99-8)	TLV-TWA	USA	1 mg/m <sup>3</sup> TWA (dust and mist, as Cu)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

#### 8.2. Exposure Controls

**Engineering Controls:** No specific controls are needed. Normal room ventilation is adequate.

**Respiratory Protection:** No specific controls are needed. Normal room ventilation is adequate

**Skin Protection:** No specific controls are needed.

**Eye Protection:** No specific controls are needed.

#### 8.3. Personal Protective Equipment

As a general rule, wear safety glasses and gloves.

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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

<b>Appearance:</b>	Blue
<b>Physical State:</b>	Liquid
<b>Odor:</b>	Data not available
<b>Odor Threshold:</b>	Data not available
<b>pH:</b>	Data not available
<b>Melting/Freezing Point:</b>	Approximately 0°C
<b>Initial Boiling Point /Range:</b>	Approximately 100°C -
<b>Flash Point:</b>	Not applicable
<b>Evaporation Rate:</b>	Data not available
<b>Flammability:</b>	Not flammable
<b>Flammability/Explosive Limits:</b>	Data not available.
<b>Vapor Pressure:</b>	Data not available
<b>Vapor Density:</b>	Data not available
<b>Relative Density:</b>	1.04
<b>Solubility:</b>	Miscible
<b>Partition Coefficient (n-Octanol/Water):</b>	Data not available
<b>Auto-Ignition Temperature:</b>	Not applicable
<b>Decomposition Temperature:</b>	Data not available
<b>Viscosity:</b>	Data not available
<b>Explosive Properties:</b>	Data not available.
<b>Oxidizing Properties:</b>	Data not available.

### SECTION 10: Stability and Reactivity

#### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

#### 10.2. Possibility of Hazardous Reactions

Data not available.

#### 10.3. Conditions to Avoid and Incompatible Materials

Protect from freezing and physical damage.

#### 10.4. Hazardous Decomposition Products

May emit irritating fumes when heated to decomposition.

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### SECTION 11: Toxicological Information

#### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Not applicable.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

Data not available.

**Skin Corrosion and Irritation:**

Not applicable.

**Serious Eye Damage and Irritation:**

Not applicable.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

Not applicable.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Not applicable.

**Specific Target Organ Toxicity from Single Exposure:**

Not applicable.

**Specific Target Organ Toxicity from Repeated Exposure:**

Not applicable.

**Aspiration Hazard:**

Not applicable.

**Additional Toxicology Information:**

Data not available.

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### SECTION 12: Ecological Information

#### 12.1. Ecotoxicity

Very toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Very toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

#### 12.2. Persistence and Degradability

Data not available.

#### 12.3. Bioaccumulative Potential

Data not available.

#### 12.4. Mobility in Soil

Data not available.

#### 12.5. Other Adverse Ecological Effects

Data not available.

### SECTION 13: Disposal Considerations

#### 13.1. Waste Treatment Methods

Data not available.

### SECTION 14: Transportation Information

#### 14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

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### 14.2. Transportation by Air - International Air Transport Association (IATA)

UN Number: N/A

Proper Shipping Name:

Hazard Class:

Packing Group:

Hazard Placard Labels:

## SECTION 15: Regulatory Information

### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Copper Sulfate Pentahydrate (CAS # 7758-99-8): 10 lb final RQ; 4.54 kg final RQ

### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Copper Sulfate Pentahydrate (CAS # 7758-99-8): 1.0 % de minimis concentration (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine.)

### 15.5. Massachusetts Right-to-Know Substance List

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Water (CAS # 7732-18-5): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Environmental hazard

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.7. New Jersey Worker and Community Right-to-Know Components

Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 0549

Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 2215

Copper Sulfate Pentahydrate (CAS # 7758-99-8): SN 2215 TPQ: 500 lb (Category Code N100. Includes any unique chemical substance that contains the named metal as part of that chemical structure, except C.I. Pigment Blue 15, C.I. Pigment Green 7, and C.I. Pigment Green 36)

### 15.8. California Proposition 65

Not listed.

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### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Water (CAS # 7732-18-5): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

Water (CAS # 7732-18-5): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS),

European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Very toxic to aquatic life.

Avoid release to the environment.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

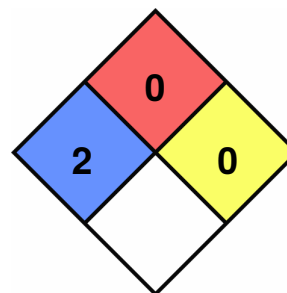
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

### 16.3. National Fire Protection Association (NFPA) Rating

Health: 2  
Flammability: 0  
Reactivity: 0  
Special Hazard:



### 16.4. Document Revision

Last Revision Date: 5/16/2019





## Safety Data Sheet

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and THOMAS SCIENTIFIC assumes no legal responsibility or liability whatsoever resulting from its use.