

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name. : Fehling's Solution A, Copper No. 1  
Product code : LC14200

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

#### 1.3. Details of the supplier of the safety data sheet

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Aquatic Acute 2 H401  
Aquatic Chronic 2 H411

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS09

Hazard statements (GHS-US) : H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards

Other hazards not contributing to the classification : None.

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

Full text of H-phrases: see section 16

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	93.07	Not classified
Copper (II) Sulfate, Pentahydrate	(CAS No) 7758-99-8	6.93	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

# Fehling's Solution A, Copper No. 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
- Symptoms/injuries after inhalation : None under normal use.
- Symptoms/injuries after skin contact : Slight irritation.
- Symptoms/injuries after eye contact : May cause slight irritation.
- Symptoms/injuries after ingestion : Nausea. Vomiting. Diarrhoea.
- Symptoms/injuries upon intravenous administration : Not available.
- Chronic symptoms : Affection of the renal tissue. Enlargement/affection of the liver.

### 4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Explosion hazard : Not applicable.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Isolate from fire, if possible, without unnecessary risk. Dike and contain spill.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

# Fehling's Solution A, Copper No. 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

Appropriate engineering controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.06
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: None.
Explosive limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Oxidizing agent.

#### 10.6. Hazardous decomposition products

Sulfur compounds. fume.

# Fehling's Solution A, Copper No. 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
LD50 oral rat	300 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Based on available data, the classification criteria are not met  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
Based on available data, the classification criteria are not met  
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified  
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified  
Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : None under normal use.  
Symptoms/injuries after skin contact : Slight irritation.  
Symptoms/injuries after eye contact : May cause slight irritation.  
Symptoms/injuries after ingestion : Nausea. Vomiting. Diarrhoea.  
Symptoms/injuries upon intravenous administration : Not available.  
Chronic symptoms : Affection of the renal tissue. Enlargement/affection of the liver.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Fehling's Solution A, Copper No. 1	
LC50 fishes 1	1.44 mg/l

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
LC50 fishes 1	1.5 mg/l (24 h; Lepomis macrochirus; TOXICITY TEST)
LC50 fish 2	0.17 mg/l 24 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	3.8 ppm (24 h; Salmo gairdneri (Oncorhynchus mykiss); Fresh water)

#### 12.2. Persistence and degradability

Fehling's Solution A, Copper No. 1	
Persistence and degradability	May cause long-term adverse effects in the environment.

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
Persistence and degradability	Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

#### 12.3. Bioaccumulative potential

Fehling's Solution A, Copper No. 1	
Bioaccumulative potential	Not established.

# Fehling's Solution A, Copper No. 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
Bioaccumulative potential	Bioaccumable. Not established.

### 12.4. Mobility in soil

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
Ecology - soil	Toxic to flora.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

### 14.1. UN number

No dangerous good in sense of transport regulations

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

### Overland transport

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Copper (II) Sulfate, Pentahydrate (7758-99-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	10 lb

### 15.2. International regulations

#### CANADA

Fehling's Solution A, Copper No. 1	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Copper (II) Sulfate, Pentahydrate (7758-99-8)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

### 15.2.2. National regulations

# Fehling's Solution A, Copper No. 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Copper (II) Sulfate, Pentahydrate (7758-99-8)

Listed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

### Copper (II) Sulfate, Pentahydrate (7758-99-8)

## SECTION 16: Other information

Indication of changes : Revision - See : \*

Other information : None.

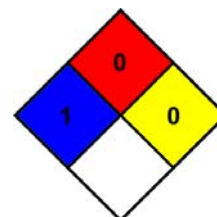
Full text of H-phrases: see section 16:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
H301	Toxic if swallowed
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012)

*Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.*