

Fehling's Solution A

SECTION 1. IDENTIFICATION

Product Identifier	Fehling's Solution A
Other Means of Identification	None
Product Code(s)	FE1040
Product Family	Inorganic solution
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0498

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A

Label Elements



Signal Word:
Warning

Hazard Statement(s):

May be harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.

Precautionary Statement(s):

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice or attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Disposal:

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Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Very toxic to aquatic life.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Water	7732-18-5	93.1	Dihydrogen Oxide
COPPER(II) SULFATE, PENTAHYDRATE	7758-99-8	6.9	Sulfuric acid copper(2+) salt (1:1) pentahydrate

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Call a Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive sulfur oxides. Copper oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or

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gases. Use water spray to flush spills away from ignition sources. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

No special precautions are necessary. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Water	Not established		Not established			
COPPER(II) SULFATE, PENTAHYDRATE	1 mg/m ³		1 mg/m ³			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: nitrile rubber.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear blue liquid.
Odour	Odourless
Odour Threshold	Not available
pH	Not available

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Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.047
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Incompatible materials.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Corrosive sulfur oxides. copper oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Water	Not available	> 89840 mg/kg (rat)	Not available
COPPER(II) SULFATE, PENTAHYDRATE		960 mg/kg (rat)	> 1000 mg/kg (rabbit)

Skin Corrosion/Irritation

There is limited evidence of mild irritation.

Serious Eye Damage/Irritation

There is limited evidence of mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

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Inhalation

No information was located.

Ingestion

May cause irritation of the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Water	Not Listed	Not Listed	Not Listed	Not Listed
COPPER(II) SULFATE, PENTAHYDRATE	Not evaluated	Not designated	Not Listed	

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION**Safety, Health and Environmental Regulations****Canada****Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Listed on the DSL.

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USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 1	Flammability - 0	Instability - 0
SDS Prepared By	Alphachem Limited		
Phone No.	(905)-821-2995		
Date of Preparation	May 03, 2016		
Date of Last Revision	September 21, 2016		
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).		
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