

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product name:** FEHLING'S REAGENT N. 1**Synonyms:** COPPER (II) SULFATE SOLUTION

CUPRIC SULFATE STANDARD

CUPRIC SULFATE SOLUTION ACC. FEHLING

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of substance / mixture:** PC21: Laboratory chemicals. ERC1: Manufacture of substances**1.3. Details of the supplier of the safety data sheet****Company name:** PHILIP HARRIS

2 Gregory Street

Hyde

Cheshire

SK14 4HR

United Kingdom

Tel: +44 (0)845 1200 506**Fax:** +44 (0)161 367 2140**Email:** enquiries@philipharris.co.uk**1.4. Emergency telephone number****Emergency tel:** +44 (0) 845 1200 506**Manufacturer:** Eurolab Supplies Limited

Unit 6 - Ravenhead Business Park

Ravenhead Road

St Helens

Merseyside

WA10 3DB

Tel: 01744 455 100

Fax: 0870 034 2056

Email: sales@eurolabsupplies.co.uk**Section 2: Hazards identification****2.1. Classification of the substance or mixture****Classification under CHIP:** N: R50/53**Classification under CLP:** Aquatic Chronic 1: H410; Aquatic Acute 1: H400**Most important adverse effects:** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 2

2.2. Label elements

Label elements under CLP:

Hazard statements: H410: Very toxic to aquatic life with long lasting effects.

Signal words: Warning

Hazard pictograms: GHS09: Environmental



Precautionary statements: P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container to approved waste disposal plant.

Label elements under CHIP:

Hazard symbols: Dangerous for the environment.



Risk phrases: R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

COPPER SULPHATE

EINECS	CAS	CHIP Classification	CLP Classification	Percent
231-847-6	7758-98-7	Xn: R22; Xi: R36/38; N: R50/53	Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	1-10%

Non-hazardous ingredients:

WATER

EINECS	CAS	CHIP Classification	CLP Classification	Percent
-	7732-18-5	-	-	>90%

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 3

SULPHURIC ACID

231-639-5	7664-93-9	C: R35	Skin Corr. 1A: H314	<1%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Never give anything by mouth to an unconscious person Wash out mouth with water.
Consult a doctor.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

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

Immediate / special treatment: No data available.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes. In combustion emits toxic fumes of sulphur oxides.
Borane/boron oxides Copper Oxides

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protection equipment. Refer to section 8 of SDS for personal protection details. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Turn leaking containers leak-side up to prevent the escape of liquid. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 4

6.2. Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not discharge into drains or rivers.
Contain the spillage using bunding. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: For precautions see section 2.2

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids. Containers which are open must be carefully resealed and kept upright to prevent leakage.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): Apart from uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

COPPER SULPHATE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1 mg/m ³	2 mg/m ³	-	-

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: The floor of the storage room must be impermeable to prevent the escape of liquids.
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full face

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 5

respirator with multi purpose combination (US) or type AXBEK (EN14387 respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection use a full face supplied air respirator. Use respirators and components tested & approved under appropriate government standards eg CEN (EU) or NIOSH (US).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use.

Wash and dry hands. Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Eye protection: Safety glasses with side-shields conforming to EN166

Skin protection: Protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Environmental: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Blue

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: No data available.

Boiling point/range°C: No data available.

Flammability limits %: lower: No data available.

Flash point°C: No data available.

Autoflammability°C: No data available.

Relative density: 1.038-1.06 g/ml@20oC

VOC g/l: No data available.

Melting point/range°C: No data available.

upper: No data available.

Part.coeff. n-octanol/water: No data available.

Vapour pressure: No data available.

pH: No data available.

9.2. Other information

Other information: No data available.

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 6

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes. In the event of fire see section 5.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

COPPER SULPHATE

IVN	RAT	LD50	48900	µg/kg
ORL	MUS	LD50	369	mg/kg
ORL	RAT	LD50	520	mg/kg

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Not biodegradable.

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 7

12.3. Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms. Toxic to soil organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Dispose of as unused product.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 8

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H410: Very toxic to aquatic life with long lasting effects.

R22: Harmful if swallowed.

R35: Causes severe burns.

R36/38: Irritating to eyes and skin.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Legend to abbreviations: PNEC = predicted no effect level

DNEL = derived no effect level

LD50 = median lethal dose

LC50 = median lethal concentration

EC50 = median effective concentration

IC50 = median inhibitory concentration

dw = dry weight

bw = body weight

cc = closed cup

oc = open cup

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

SCU = subcutaneous

SKN = skin

DRM = dermal

OCC = ocular/corneal

PCP = physico-chemical properties

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive

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SAFETY DATA SHEET

FEHLING'S REAGENT N. 1

Page: 9

and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.