



## Safety Data Sheet

### Fehling's solution (A)



#### Section 1: Chemical Product and Company Identification

**Product Name:** Fehling's solution (A)

**Contact Information:**

**Catalog Codes:** 750

**CAS#:** -

**Email:** [info@drm-chem.com](mailto:info@drm-chem.com)

**RTECS:** -

**Address:** #7, Afshar javan Alley,  
Sohrevardi  
St, Tehran, Iran

**TSCA:** -

**Synonym:** Copper (II) sulfate solution

**post code:** 1551818111

**Chemical Name:** Fehling's solution (A)

**Tehran Sales:** +98 21 88177760

**Chemical Formula:** -

**Order Online:** [Drm-chem.com](http://Drm-chem.com)

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Fehling's solution (A)	-	

**Toxicological Data on Ingredients:** static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,032 mg/l - 96 h

#### Section 3: Hazards Identification

**Classification of the substance or mixture**

Short-term (acute) aquatic hazard, (Category 1) H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, (Category 2) H411: Toxic to aquatic life with long lasting effects.

## Label elements

### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Warning

Hazard Statements

H410

Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273

Avoid release to the environment.

P391

Collect spillage.

P501

Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements

none

### Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Warning

Hazard Statements

none

Precautionary Statements

none

Supplemental Hazard statements

none

### Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## Section 4: First Aid Measures

### Description of first-aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

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

No data available

## Section 5: Fire and Explosion Data

### Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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

Sulfur oxides

Copper oxides

Not combustible.

Ambient fire may liberate hazardous vapours. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

#### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®).

Dispose of properly. Clean up affected area.

### Reference to other sections

For disposal see section 13.

## Section 7: Handling and Storage

### Precautions for safe handling

For precautions see section 3.

### Conditions for safe storage, including any incompatibilities

### Storage conditions

Tightly closed.

### Storage class

Storage class (TRGS 510): 12: Non Combustible Liquids

## Section 8: Exposure Controls/Personal Protection

**Control parameters****Ingredients with workplace control parameters****Exposure controls****Personal protective equipment****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**

not required

**Respiratory protection**

Not required; except in case of aerosol formation.

**Control of environmental exposure**

Do not let product enter drains.

**Section 9: Physical and Chemical Properties****Information on basic physical and chemical properties**

a) Physical state	liquid
b) Color	No data available
c) Odor	No data available
d) Melting point/freezing point	No data available
e) Initial boiling point and boiling range	No data available
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	Not applicable
i) Autoignition temperature	Not applicable

j) Decomposition temperature	No data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	at 20 °C soluble
n) Partition coefficient: n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	No data available
Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none
<b>Other safety information</b>	
No data available	

### Section 10: Stability and Reactivity Data

**Reactivity**

No data available

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature).

**Possibility of hazardous reactions**

Violent reactions possible with:

The generally known reaction partners of water.

**Conditions to avoid**

no information available

**Incompatible materials**

Powdered metals, hydroxylamine, Strong reducing agents, Magnesium

**Hazardous decomposition products**

In the event of fire: see section 5

**Section 11: Toxicological Information****Information on toxicological effects****Mixture****Acute toxicity**

Oral: No data available

Acute toxicity estimate Oral - > 2.000 mg/kg

(Calculation method)

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

### **Additional Information**

Endocrine disrupting properties

#### **Product:**

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

### **Components**

#### **Copper(II) sulphate**

##### **Acute toxicity**

LD50 Oral - Rat - male and female - 481 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Oral - 481 mg/kg

(Acute toxicity estimate according to Regulation (EC) No. 1272/2008)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

##### **Skin corrosion/irritation**

Remarks: Causes skin irritation.

##### **Serious eye damage/eye irritation**

Remarks: Causes serious eye irritation.

##### **Respiratory or skin sensitization**

Freund's complete adjuvant test - Guinea pig

Result: negative

(OECD Test Guideline 406)

The value is given in analogy to the following substances: Copper sulphate Pentahydrate

### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male - Liver cells

Result: negative

Method: Mutagenicity (micronucleus test)

Species: Mouse - male and female - Red blood cells (erythrocytes)

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

Possible risk of congenital malformation in the fetus.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

## **Section 12: Ecological Information**

### **Toxicity**

#### **Mixture**

No data available

#### **Persistence and degradability**

No data available

#### **Bioaccumulative potential**

No data available

#### **Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Endocrine disrupting properties**

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Other adverse effects**

No data available

**Components****Copper(II) sulphate**

Toxicity to fish                      static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,032 mg/l - 96 h  
Remarks: (ECOTOX Database)

Toxicity to daphnia                      static test EC50 - Daphnia magna (Water flea) - 0,092 mg/l -  
and other aquatic                      48 h  
invertebrates                      (OECD Test Guideline 202)  
Remarks: (anhydrous substance)

Toxicity to daphnia                      semi-static test NOEC - Daphnia magna (Water flea) - 0,028  
and other aquatic                      mg/l - 21 d  
invertebrates(Chronic                      (OECD Test Guideline 211)  
toxicity)

**Section 13: Disposal Considerations****Waste treatment methods**

No data available

**Section 14: Transport Information****UN number**

ADR/RID: 3082

IMDG: 3082

IATA: 3082

**UN proper shipping name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper(II) sulphate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper(II) sulphate)

IATA: Environmentally hazardous substance, liquid, n.o.s. (Copper(II) sulphate)

**Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**Environmental hazards**

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

**Special precautions for user**

Tunnel restriction code: (-)

Further information : No data available

**Section 15: Other Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Authorisations and/or restrictions on use****National legislation**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1

ENVIRONMENTAL HAZARDS

**Other regulations**

Take note of Dir 94/33/EC on the protection of young people at work.

**Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

## Section 16: Other Information

**References:** Not available

**Other Special Considerations:** Not available

**Created:** 11/2025

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