SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: Kjeltabs Cu-3.5

Container size: 3.9 kg / 1000 tablets

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

Application: For laboratory use for Kjeltec™ Systems

1.3. Details of the supplier of the safety data sheet

Supplier: FOSS Analytical AB
Comp.Reg.No. 556105-6564
Pål Anders väg 2
SE-263 21 Höganäs
Tel:+46 42 361500
Fax: +46 42 331465
info@foss.dk
www.foss.dk

1.4. Emergency telephone number

Emergency telephone: Poison Control Centers may be available in specific States.
SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified: N;R50-53

Human health: May irritate eyes and skin.

Environment: The product is very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

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

S57 Use appropriate containment to avoid environmental contamination.

S60 This material and its container must be disposed of as hazardous waste.

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

NFPA Rating: Health:1 Fire:0 Reactivity:0 Other:-

2.3. Other hazards

PBT/vPvB: Not relevant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: inorganic salts

67/548/EEC:

<table>
<thead>
<tr>
<th>%</th>
<th>CAS-No.</th>
<th>EC No.</th>
<th>REACH Reg. No.</th>
<th>Chemical name</th>
<th>Hazard classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-&lt;20</td>
<td>7758-99-8</td>
<td>-</td>
<td>-</td>
<td>Copper(II) sulfate pentahydrate</td>
<td>Xn;R22 Xi;R36/38 N;R50-53</td>
<td></td>
</tr>
</tbody>
</table>

References: The Full Text for all R-Phrases and Hazard Statements is Displayed in Section 16.
SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. Seek medical advice and bring along these instructions.

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

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

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

Medical attention/treatments: Not known.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Specific hazards: When heated and in case of fire, toxic vapours/gases may be formed.

5.3. Advice for firefighters

Protective measures in fire: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid inhalation of dust and contact with skin and eyes. For personal protection, see section 8. Follow precautions for safe handling described in this material safety data sheet.

6.2. Environmental precautions

Environmental precautions: Do not discharge onto the ground or into water courses.

6.3. Methods and material for containment and cleaning up

Spill Cleanup Methods: Collect spillage with vacuum cleaner, shovel, broom or the like. Flush contaminated area with plenty of water.

6.4. Reference to other sections

References: For waste disposal, see section 13.
SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Avoid inhalation of dust and contact with skin and eyes.

Technical measures: Avoid spreading dust.

Technical precautions: Extraction Hood

7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: No special precautions.

Storage conditions: Keep well closed and protected from direct sunlight and moisture. Store at room temperature.

TRANSPORT CONDITIONS: Temperature not critical.

7.3. Specific end use(s)

Specific use(s): Not relevant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name:</th>
<th>As:</th>
<th>Exposure limits:</th>
<th>Type:</th>
<th>Notes:</th>
<th>References:</th>
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</thead>
<tbody>
<tr>
<td>-</td>
<td>Copper dusts and mists</td>
<td>Cu</td>
<td>1 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
<tr>
<td>-</td>
<td>Copper, fume</td>
<td>Cu</td>
<td>0.1 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>-</td>
<td>Copper, dusts and mists</td>
<td>Cu</td>
<td>1 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>-</td>
<td>Copper, fume</td>
<td>-</td>
<td>0.2 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Personal protection: Personal protection equipment should be chosen according to the ANSI standards and in collaboration with the supplier of the personal protective equipment.

Respiratory equipment: Risk of inhalation of dust: Use respiratory equipment with particle filter, type P2.

Hand protection: Risk of contact: Wear protective gloves. Nitrile gloves are recommended. Alternative types of gloves: Butyl rubber, neoprene or PVC

Eye protection: Risk of contact: Wear goggles/face shield.

Environmental Exposure Controls: No information available.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: flat round blue speckled tablets
Odor: Odorless
pH: not relevant
Melting point: not available
Boiling point: not available
Flash point: not available
Explosion limits: not relevant
Relative density: not available
Solubility: soluble in water

9.2. Other information

Other data: Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: None known.

10.2. Chemical stability

Stability: Stable.

10.3. Possibility of hazardous reactions

Hazardous Reactions: None known.

10.4. Conditions to avoid

Conditions/ materials to avoid: None specific.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Hazardous decomposition products: None in particular.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhalation: Dust may irritate throat and respiratory system and cause coughing.
Skin contact: May irritate.
Eye contact: Dust in the eyes will cause irritation. Risk of corneal damage.
Ingestion: Irritating. May cause nausea, stomach pain and vomiting.
LD50 (oral, rat): 300 mg/kg for Copper(II) sulfate pentahydrate
Specific effects: None known. This product contains no ingredient listed on the NTP, OSHA or IARC carcinogen lists.
SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity: The product is very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. $0.01 < EC50 \leq 0.1 \text{ mg/l} \ (\text{Copper(II) sulfate pentahydrate})$

12.2. Persistence and degradability
Degradability: The product solely consists of inorganic compounds which are not biodegradable.

12.3. Bioaccumulative potential
Bioaccumulative potential: No data available on bioaccumulation.

12.4. Mobility in soil
Mobility: The product is water soluble and may spread in water systems. No data available.

12.5. Results of PBT and vPvB assessment
PBT/vPvB: Not relevant.

12.6. Other adverse effects
Other adverse effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Dispose of waste and residues in accordance with local authority requirements. Waste is classified as hazardous waste.

Waste from residues: EWC-code: 16 05 06
14. SECTION 14: TRANSPORT INFORMATION

14.1. UN number
UN-No: 3077

14.2. UN proper shipping name
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Copper(II) sulfate pentahydrate)

14.3. Transport hazard class(es)
Class: 9

14.4. Packing group
PG: III

14.5. Environmental hazards
Marine pollutant: Yes
Environmentally Hazardous substance: Yes

14.6. Special precautions for user
Special precautions: None known.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Transport in bulk: Not relevant.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Specific provisions: National specific regulation may apply.
National regulation: Europe/USA:

This Material Safety Data Sheet has been prepared according to the EU-regulation.

The following lists and legislation have been checked:
Threshold Limit Values (2010), ACGIH, by the American Conference on Governmental Industrial Hygienists.

15.2. Chemical Safety Assessment
CSA status: Not relevant.
SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

Additional information: -

R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.