1. Identification of the product and the company
   Product Name : Cuprous Chloride
   Company Name : PT. Kawaguchi Kimia Indonesia
   Office Address : Jl. Hayam Wuruk no. 44 Lt. II / 2B, Jakarta 11160,
                   Indonesia.
   Tel. No       : (62 – 21) 6498693, 6263477
   Fax No        : (62 – 21) 6260973
   Email         : kawamia@bit.net.id
   Intended Use  : Pigments for blue and catalyst.

2. Hazard and Harm Identification
   Classification : Corrosive.
   Hazardous : Non combustible.
   When heated rapidly, it generates toxic gas (Cl2) or fume of
   Cuprous Oxide may be formed. Happen intense reaction when
   blended with potassium metal.
   Harmful : Dermatitis might be caused when coming in contact with the skin. Eyes and noses are
   stimulated. Mucous membranes such as the nose, throats, and
   bronchial tubes are violated when inhaling.

3. Composition and Ingredients Information
   Classification : Single substance
   Chemical Name : Cuprous Chloride
   Content : 98% minimum
   Chemical formula : CuCl
   CAS No. : 7758-89-6
   Existing material No. : (1)-210
   United classification : Class 8 grade III
   United nation No. : 2802

4. First Aid Measures
   General : Call a physician immediately.
   Inhalation : Remove to fresh air space. If difficulty in breathing, keep warm and get medical treatment
               immediately.
   Skin : Immediately take off the polluted clothes and shoes. Then wash skin with water and soap.
          If be unusual, get medical check.
   Eye : Immediately wash eyes with water for at least 15 minutes. After that get medical treatment. In
        case eyes to do contact lenses, if don't stick eyes, remove lenses then wash eyes.
   Swallow : In case be consciousness,
immediately rinses out mouth. Then the content of the stomach
is made to be vomited after a large amount of milk or water is
made to be drunk. After that get medical treatment.

In case be unconsciousness, immediately get medical treatment.
At the time if vomiting occurs, the patient should lie on their left
side while vomiting to reduce the risk of aspiration.

5. Fire Fighting Measures
Hazardous decomposition, combustion products.
: Non combustible but it is
happened chlorine and poisonous gas by fire.
Method of extinguish a fire : Fire is extinguished nothing
the dispersion prevention. Pollution by the outflow of the
extinction water and the dilution water is noted. Transfer the
container to safety place.
Protect for the fire fighter : Must wear proper protective
equipment.

6. Accidental Release Measures
Caution for Human : Must wear proper protective equipment.
Caution for environment : Prevent diffusion to be covered
by polyethylene sheet and other.
Method for cleaning up : Collect leakage to container
and shut. Wipe off a leakage to use wet cloth.

7. Handling and Storage
Handling : Dust is prevented being generated as much as possible,
and the local exhaust ventilation is set up in the generated place.
Must wear proper protective equipment for avoid the contact of
eyes, the skins, and clothes.
Storage : Keep in the cool dark place
where ventilation is good is closely stopped.

8. Exposure Controls and Human Protection
Allowable Concentration : 1 mg/m3 (OSHA)
Human Protection : Shut the cause of generation
of dust. Set the local exhaust ventilation.
Respiration Organs : Wear the dust proof mask.
Hand : Wear the rubber gloves.
Eyes : Wear the glasses or goggles.

9. Physical and Chemical Properties
Appearance : Colorless cubic crystal
Molecular weight : 99.00
Melting point : 422°C
Boiling point : 1366°C
Specific gravity : 4.14
Insoluble: Water, Alcohol
Soluble: Hydrochloric acid, Aqueous ammonia.

10. Stability and Reactivity
Stability: Color changes to green by oxidation in air rapidly and fades to brown by light. Solution is easy to be oxidised in air.
Reactivity: When heated rapidly, it generates toxic gas (Cl2). Happen intense reaction when blended with potassium metal.

11. Toxicological Information
Acute toxicity
Oral: Rat LD50 265mg/Kg
     Mouse LD50 140mg/Kg
Inhalation: No data
Localized Influence
Skin: No data
Carcinogenic: No data

12. Ecological Information
Degradation biotic: No data
Accumulation: No data
Toxicity to fishes: Toxicity

13. Disposal Consideration
General: It disposes properly according to the law in each country and the region.
Product: Pay attention to effect to rivers and lakes.

14. Transport Information
General: It disposes properly according to the law in each country and the region.
Classification: 8 Corrosive
Sea transport: Follow method of transport, be provided in IMDG.
Air transport: Follow method of transport, be provided in IATA.
Safety measures: Take measures for the fall and the fall prevention.

15. Application of Regulations
Toxic and hazardous Material Control Act (Japanese)
16. Other Information

: Not be particularly