

MATERIAL SAFETY DATA SHEET

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MSDS No. 9411104 9411106 Effective Date: December 1, 2005

| ECTION | I NAME | 24 HOUR EMERGENCY ASSISTAL | NC |
|--------------------|--------------------------------|--|-----------|
| roduct | Copper (II) Sulfate, Anhydrous | 416-984-3000 Health | 2 |
| hemical ynonyms | Cupric Sulfate, Anhydrous | NFPA 2 0 Flammability | 0 |
| ormula | CuSO ₄ | HAZARD RATING WHMIS | 0 |
| AS No. | 7758-98-7 | Minimal Slight Moderate Serious Seriou | vere 4 |

| % > 99% | TLV Units TWA: 1 mg/m ³ dust |
|----------------|---|
| > 99% | TWA: 1 mg/m ³ dust |
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| SECTION III | PHYSICAL DA | ATA | |
|---------------------------|----------------------------|---|---------------|
| Melting Point (°C) | 340°C | Specific Gravity (H ₂ O = 1) | 2.28 @ 15.6°C |
| Boiling Point (°C) | Decomposes. | Percent Volatile by Volume (%) | N/A |
| Vapor Pressure (mm Hg) | N/A | Evaporation Rate (=1) | N/A |
| Vapor Density (Air=1) N/A | | | |
| Solubility in Water | Appreciable. | | |
| Appearance & Odor | Off white powder; no odor. | | |

| SECTION IV | FIRE ANI | FIRE AND EXPLOSION HAZARD DATA | | |
|-------------------|----------------|--|-------|-------|
| Flash point | Non-flammable. | Flammable Limits in Air % by Volume N/A | Lower | Upper |
| Firefighting | | | 2 | |

Use dry chemical, ${\rm CO_2}$, alcohol foam, or water spray. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

Procedures

Fire or excessive heat may produce hazardous decomposition products to be produced as dust or fume.

| TDG | Environmentally hazardous substance UN 3077 |
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these material and the safety and health of employees. For laboratory use only. Not for drug, food or household use. Keep out of reach of children. Printed on recycled paper.

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| SECTION V | REACTIVITY DATA CC0531 | | |
| Chemical | Yes X If no. under what conditions? | | |
| Stability | No | | |
| Incompatible with | Yes X | | |
| Other products | No Alkalies, phosphates, acetylene, hydrazine and nitromethane. | | |
| Hazardous | | | |
| Decomposition | Oxides of sulfur, copper fumes. | | |
| Products | | | |
| Reactive under | Slowly effloresces in air. | | |
| what conditions | didny shiotosoca in all. | | |
| SECTION VI | TOXICOLOGICAL PROPERTIES | | |
| Route of Entry | Ingestion. Inhalation. Skin contact. Eyes. | | |
| TLV | TWA: 1 mg/m ³ dust; 0.2 mg/m ³ fumes. | | |
| | | | |
| Toxicity for animals | LD50: 300 mg/kg oral-rat. | | |
| Chronic effects on | Exposure of the eyes to a low level of dust can produce eye irritation. Skin exposure can | | |
| humans | produce skin destruction or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Target organs: Liver, kidneys, lungs, spleen. | | |
| | James and a state | | |
| Acute effects on | Harmful if inhaled or swallowed. Causes irritation to skin and eyes. | | |
| humans | Translation in straighted. Gadases interior to skill and eyes. | | |
| SECTION VII | PREVENTIVE MEASURES | | |
| Waste Disposal | Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities. | | |
| Storage | Keep container dry. Keep in a cool place. Keep container tightly closed. | | |
| | Keep away from acids, oxidizers, alkalies, heat, moisture. | | |
| | | | |
| Precautions | Avoid contact with skin and eyes. DO NOT breathe dust. DO NOT ingest. If ingested, seek medical advice immediately. | | |
| Y | , | | |
| Spill or leak | Use appropriate tools to put the spilled solid in a convenient waste disposal container. | | |
| Opin of leak | Ose appropriate tools to put the spilled solid in a convenient waste disposal container. | | |
| Protective Clothing | | | |
| - Totective Clothing | Safety glasses, lab coat, dust respirator, gloves. | | |
| SECTION VIII | FIRST AID MEASURES | | |
| Specific first aid measures | | | |
| modsures | Ingestion: Call physician or Poison Control Center immediately. Induce vomiting only if | | |
| | advised by the appropriate medical personnel. Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping | | |
| | eyelids open. Seek medical attention. Skin contact: Gently and thoroughly wash the | | |
| | contaminated skin with running water and non-abrasive soap. Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. | | |
| | Allow victim to rest in a well ventilated area. Seek immediate medical attention. | | |
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| SECTION IX | PREPARATION OF THE MSDS | | |
| 200 8000 000 | ate December 1, 2005 Approved Michael Raszeja | | |