

## 1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

**PRODUCT** : COPPER SULPHATE

**DOCUMENT NO** : C26 **ISSUE DATE:** 9 May 2001

**COMPANY** : T N Lawrence & Son Ltd  
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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**CHEMICAL DESCRIPTION** : Copper Sulphate Pentahydrate, Blue Vitriol, Copper (II) Sulfate (1:1)

INGREDIENTS Name	%	CAS	EINECS	Supply Class
	100	7758-99-8	231-847-6	R22, R36/38, R50/53

## 3. HAZARDS IDENTIFICATION

: Harmful if swallowed  
Irritating to eyes and skin  
Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

## 4. FIRST AID MEASURES

**EYES** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid

**SKIN** : Remove contaminated clothing. Immediately flush skin with soap and plenty of water for at least 15 minutes. Get medical attention

**INGESTION** : Give plenty of water to drink. Get immediate medical attention

**INHALATION** : Remove to fresh air, keep warm and at rest. Get medical aid

## 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA** : Water spray, dry chemical, Carbon dioxide, appropriate foam

**HAZARDS** : Non-flammable, non combustible. Development of hazardous combustion gases or vapours possible in the event of fire: sulfur oxides. Prevent fire fighting water from entering surface water or groundwater

**PROTECTION** : Wear self contained breathing apparatus and protective clothing

## **6. ACCIDENTAL RELEASE MEASURES**

<b>PERSONAL</b>	:	Wear personal protective equipment. Avoid dust inhalation and generation
<b>ENVIRONMENTAL</b>	:	Contain and control the spillage on site. Do not allow product to enter sewers, ground water, rivers
<b>RECOVERY</b>	:	Sweep up and shovel into drums or plastic containers for reuse or disposal. Wash the spillage area clean with plenty of water

## **7. HANDLING AND STORAGE**

<b>HANDLING</b>	:	Wear personal protective equipment. Avoid dust inhalation and generation
<b>STORAGE</b>	:	Keep in tightly closed containers in a cool, dry area. Keep out of direct sunlight, protect from air and moisture
<b>VENTILATION</b>	:	Ensure adequate ventilation

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **OCCUPATIONAL LIMITS**

Copper dusts and mists  
(as Cu)

:	OES LTEL 8 Hr TWA	:	1 mg m <sup>3</sup>
:	OES STEL 15 mins:	:	2 mg m <sup>3</sup>
:	MDHS 91	:	

### **ENGINEERING CONTROLS**

: COSHH-Potentially exposed employees require health surveillance (medical assessment)

### **RESPIRATORY PROTECTION**

: Approved respirator

### **HAND PROTECTION**

: Rubber or plastic gloves

### **EYE PROTECTION**

: Safety glasses/goggles

### **OTHER**

: Protective clothing

## **9. PHYSICAL / CHEMICAL PROPERTIES**

<b>APPEARANCE</b>	:	Blue crystalline solid
<b>ODOUR</b>	:	Odourless
<b>PH</b>	:	3 - 4 (5% H <sub>2</sub> O Solution)
<b>VISCOSITY</b>	:	N/A
<b>BOILING POINT</b>	:	Dehydrates partially at 29C, completely at 250C
<b>MELTING POINT</b>	:	Over 560 C decomposes
<b>FLASH POINT</b>	:	N/A
<b>VAPOUR PRESSURE</b>	:	N/A
<b>VAPOUR DENSITY</b>	:	N/A
<b>RELATIVE DENSITY(SG)</b>	:	1.2 g/cm <sup>3</sup> (bulk)
<b>THERMAL DECOMPOSITION</b>	:	88 - 245 c release of crystalline water 340 - 650 C
<b>SOLUBILITY</b>	:	Very soluble in water - 317 g/l @ 20 C Soluble in organic solvents

### 10. STABILITY AND REACTIVITY

<b>STABILITY</b>	:	Stable under normal conditions
<b>CONDITIONS TO AVOID</b>	:	Humidity (moist air) and water (product is highly hygroscopic), high temperature, heating, incompatible materials and exposure to air
<b>MATERIALS TO AVOID</b>	:	Acetylene, reducing agents, hydroxylamine, magnesium, hydrazine, nitromethane
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	:	Oxides of sulphur, oxides of copper, copper fumes, irritating and toxic fumes and gases

### 11. TOXICOLOGICAL INFORMATION

#### **SHORT TERM**

<b>EYES</b>	:	Severe irritant. Pain, redness, watering, blurred vision, conjunctivitis, ulceration and corneal abnormalities
<b>SKIN</b>	:	Dermal LD50 (rat) : > 2000 mg/kg Mild skin sensitiser - eczema. Redness and possible burns
<b>INGESTION</b>	:	Oral LD50 (rat) : 960 mg/kg Gastrointestinal tract irritation with nausea, vomiting, diarrhoea, abdominal pains and possible burns
<b>INHALATION</b>	:	Respiratory tract irritation with possible burns. Sore throat, cough, shortness of breath
<b>LONG TERM EFFECTS</b>	:	Liver and kidney : Non specific injury. May cause ulceration of nasal passages. May get metal fume fever from fine dust. Possible systemic effects.

### 12. ECOLOGICAL INFORMATION

<b>BIODEGRADABILITY</b>	:	N/A
<b>AQUATIC TOXICITY</b>	:	Fish LC50 : 0.1 - 2.5 mg/l/96 h (anhydrous) Daphnia magna EC50 : 0.024 mg/l/48 h (anhydrous) Algeal (Sc.quadricauda)EC50: 0.1 mg/l/4 h (anhydrous)
<b>OTHER</b>	:	WGK: 2 Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

### 13. DISPOSAL CONSIDERATIONS

<b>DISPOSAL METHOD</b>	:	Disposal should be in accordance with local authority regulations
<b>CONTAMINATED PACKAGING</b>	:	As above

#### 14. TRANSPORT INFORMATION

**TRANSPORT CLASSIFICATION** : Miscellaneous Dangerous Substances and Articles

**UN NUMBER** : 3077

**SHIPPING NAME** : 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, NOS (Copper Sulphate) 9, III

**ICAO/IATA/IMDG CLASS** : 9

**SUBSIDIARY RISK** : N/A

**PACKING GROUP** : III

**ADR CLASS** : 9



#### **TRANSPORT HAZARD SYMBOL**

**HAZARD I.D NUMBER** : 90

**EMERGENCY ACTION CODE** : 2X

**OTHER** : N/A

#### 15. REGULATORY INFORMATION

**SUPPLY CLASSIFICATION** : Harmful and Dangerous for the Environment

#### **HAZARD PICTOGRAM**



**RISK PHRASES** : 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

**SAFETY PHRASES** : S22 Do not breathe dust  
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 sheet

**OTHER** : N/A

#### 16. OTHER INFORMATION:

: Revised date: 28<sup>th</sup> June 2004 (12<sup>th</sup> Issue)

The above information complies with the Directive 67/548/EEC and amendments

The following information is provided to conform with article 13 of the EC Directive on Packaging and Packaging Waste 94/62/EC:

- Wherever possible we use returnable packaging and pallets. Details of these are on our Sales Contracts
- For any non-returnable packaging the cost of disposal is at your expense, but we do have a list of reprocessors available
- In most cases, but not all, we are able to supply products in returnable packaging but the additional cost of this will be for the customers expense. Please ask for details with your specific requirements
- Any products supplied in returnable packaging is clearly marked to this effect