ATTN: SAFETY DIRECTOR  
UNIV OF WISC-WHITEWATER  
PURCHASING OFFICE  
800 W MAIN ST  
WHITEWATER WI 53190-1705

EMERGENCY PHONE 1-314-771-5765
DATE: 04/14/95
CUST#: 2-997-94816
PO#: QF08030

MATERIAL SAFETY DATA SHEET  
PAGE 1

SECTION 1. - - - - - - - - - - - - CHEMICAL IDENTIFICATION - - - - - - - -
PRODUCT #: C7631  
NAME: CUPRIC SULFATE PENTAHYDRATE APPROX. 99%

SECTION 2. - - - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - - -
CAS #: 7758-99-8  
MP: Cu104.51
SYNONYMS:
- BLUE COPPER AS
- BLUESTONE
- BLUE VITRIOL
- COPPERFINE-ZINC
- COPPER SULFATE
- COPPER(II) SULFATE PENTAHYDRATE
- COPPER(2+) SULFATE PENTAHYDRATE
- COPPER SULFATE PENTAHYDRATE
- COPPER SULPHATE
- CRP
- CUPRIC SULFATE PENTAHYDRATE
- KUPFER SULFAT (GERMAN)
- KUPFERSULFAT-PENTAHYDRAT (GERMAN)
- KUPFERVITRIOL (GERMAN)
- ROMAN VITRIOL
- SALZBURG VITRIOL
- SULFURIC ACID
- COPPER(2+) SALT
- PENTAHYDRATE
- SULFURIC ACID COPPER(2+) SALT
(1:1)
- PENTAHYDRATE (9CI, 9CI)
- TRIANGLE
- VENCEDOR

SECTION 3. - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - -
LABEL PRECAUTIONARY STATEMENTS:
- TOXIC (USA DEFINITION), HARMFUL (EUROPEAN DEFINITION)
- HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED
- IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN
- RISK OF SERIOUS DAMAGE TO EYES
- POSSIBLE RISK OF IRREVERSIBLE EFFECTS
- POSSIBLE MUTAGEN
- TARGET ORGAN(S): LIVER
- KIDNEYS

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE
WEAR SUITABLE PROTECTIVE CLOTHING.

SECTION 4. - - - - - - - - FIRST-AID MEASURES - - - - - - - -
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND copious
AMOUNTS OF WATER
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH copious AMOUNTS OF
WATER FOR AT LEAST 15 MINUTES.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.

CONTINUED ON NEXT PAGE
PRODUCT #: C7631  MF: CU10451  NAME: CUPRIC SULFATE PENTAHYDRATE APPROX. 99%

REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.

SECTION 5. -- -- -- -- -- -- FIRE FIGHTING MEASURES -- -- -- -- -- --

EXTinguISHING MEDIA
NONCOmbUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
SPECIAL FIREFIGHTING PROCEDURES
HEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. -- -- -- -- -- -- ACCIDENTAL RELEASE MEASURES-- -- -- -- -- --

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. -- -- -- -- -- -- HANDLING AND STORAGE-- -- -- -- -- --

REFER TO SECTION 8.

SECTION 8. -- -- -- -- -- -- EXPOSURE CONTROLS/PERSONAL PROTECTION-- -- -- -- -- --

CHEMICAL SAFETY GOGGLES.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
NIOSH/MSHA-APPROVED RESPIRATOR IN NONVENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV.
DO NOT BREATHE DUST.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
TOXIC.
SEVERE EYE IRITANT.
POSSIBLE MUTAGEN.

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MATERIAL SAFETY DATA SHEET

PRODUCT #: C7631
MF#: CU10451

NAME: CUPRIC SULFATE PENTAHYDRATE APPROX. 99%

KEEP TIGHTLY CLOSED.
EFFLORESCENT.
PROTECT FROM AIR

SECTION 9. --- --- --- --- PHYSICAL AND CHEMICAL PROPERTIES --- --- --- ---

APPEARANCE AND ODOR
BLUE CRYSTALS
VAPOR PRESSURE: 7.3 MM 25°C
SPECIFIC GRAVITY: 2.284

SECTION 10. --- --- --- --- STABILITY AND REACTIVITY --- --- --- ---

INCOMPATIBILITIES
SENSITIVE TO AIR
CORRODES STEEL
FINELY POWDERED METALS
HEAT

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
SULFUR OXIDES

SECTION 11. --- --- --- --- TOXICOLOGICAL INFORMATION --- --- --- ---

ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES SKIN IRRITATION.
CAUSES SEVERE EYE IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
EXPOSURE CAN CAUSE:
DAMAGE TO THE EYES
GASTROINTESTINAL DISTURBANCES
CHRONIC EFFECTS
LABORATORY EXPERIMENTS HAVE SHOWN MUTAGENIC EFFECTS.
TARGET ORGAN(S):
LIVER, KIDNEYS
Spleen

ADDITIONAL INFORMATION
CHRONIC COPPER POISONING IS TYPIFIED BY HEPATIC CIRRHOSIS, BRAIN

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MATERIAL SAFETY DATA SHEET

PRODUCT #: C7631
NAME: CUPRIC SULFATE PENTAHYDRATE APPROX. 99%
MF: Cu10431

DAMAGE AND DEHYTERILATION, KIDNEY DEFECTS, AND COPPER DEPOSITION IN THE CORDUEA AS EXEMPLIFIED BY HUMANS WITH WILSON'S DISEASE. IT HAS ALSO BEEN REPORTED THAT COPPER POISONING HAS LEAD TO HEMOLYTIC ANEMIA AND ACCELERATES ARTERIOSCLEROSIS.

RTECS NO: GL890000
COPPER(II) SULFATE PENTAHYDRATE (1:1:5)

TOXICITY DATA
DRL-HMN LDL0:1000 MG/KG
UNR-HMN LDL0:221 MG/KG
DRL-RAT LD50:300 MG/KG
IPR-RAT LD50:107000 MG/KG
IPR-HUS LD50:33 MG/KG
IPR-MAM LD50:7500 MG/KG

TARGET ORGAN DATA
AUTONOMIC NERVOUS SYSTEM (OTHER: PARASYMPATHOMIMETIC)
BEHAVIORAL (SIMOLENCE)
GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY GLANDS)
GASTROINTESTINAL (HYPERMATIETY, DIARRHEA)
GASTROINTESTINAL (NAUSEA OR VOMITING)
LIVER (JAUNDICE, HEPATOCERULAR)
KIDNEY, URETER, BLADDER (OTHER CHANGES)
BLOOD (HENTHRAPHE)
BLOOD (OTHER HEMOLYSIS WITH OR WITHOUT ANEMIA)
NUTRITIONAL AND GROSS METABOLIC (WEIGHT LOSS OR DECREASED WEIGHT GAIN)
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. ECOLOGICAL INFORMATION
DATA NOT YET AVAILABLE.

SECTION 13. DISPOSAL CONSIDERATIONS
THE MATERIAL SHOULD BE DISSOLVED IN 1) WATER; 2) ACID SOLUTION OR 3) OXIDIZED TO A WATER-SOLUBLE STATE. PRECIPITATE THE MATERIAL AS THE SULFIDE, ADJUSTING THE PH OF THE SOLUTION TO 7 TO COMPLETE PRECIPITATION. FILTER THE INSOLUBLES AND DISPOSE OF THEM IN A HAZARDOUS-MATERIALS SITE. DESTROY ANY EXCESS SULFIDE WITH SODIUM HYDROXIDE. NEUTRALIZE THE SOLUTION BEFORE FLUSHING DOWN THE DRAIN. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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CUST#: 2-097-94816
PO#: BF08090

PRODUCT #: C7631
MF: CuI0451
NAME: CUPRIC SULFATE PENTAHYDRATE APPROX. 99%

DEL IN NEW ZEALAND; SINGAPORE; VIETNAM CHECK ACIGH TLV
NOES 1983: H2O X5421; NIS: 9; TFE 3961; NOS 17; THE 7927; TFE 2969
TOXICITY STUDIES: REPI TX-29, OCTOBER 1994
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS - COPPER COMPOUNDS.

SECTION 16. OTHER INFORMATION -
THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE reverse side of invoice or packing slip for additional terms and conditions of sale.

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