MATERIAL SAFETY DATA SHEET

SECTION 1. - - - - - - - - - CHEMICAL IDENTIFICATION - - - - - - - - -
CATALOG #: 61145
NAME: COPPER(II) ACETATE MONOHYDRATE

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -
CAS #: 6046-93-1
MF: C4H6CUO4.H2O
SYNONYMS
COPPER(2+) ACETATE, MONOHYDRATE * COPPER(II) ACETATE MONOHYDRATE *
COPPER DIACETATE MONOHYDRATE * CUPRIC ACETATE MONOHYDRATE *

SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
HARMFUL
HARMFUL IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
TARGET ORGAN(S):
LIVER
LUNGS
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - -
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - -
EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
SPECIAL FIREFIGHTING PROCEDURES
WEAR 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.
EVACUATE AREA.

SECTION 7. - - - - - - - - - HANDLING AND STORAGE- - - - - - - - -
REFER TO SECTION 8.
SECTION 8. - - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - - -
DO NOT BREATHE DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.
WASH THOROUGHLY AFTER HANDLING.
USE ONLY IN A CHEMICAL FUME HOOD.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.

SECTION 9. - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - -
APPEARANCE AND ODOR
SOLID.
PHYSICAL PROPERTIES
SPECIFIC GRAVITY:  1.882
VAPOR DENSITY:  6.8 G/L
SWISS POISON CLASS:  3

SECTION 10. - - - - - - STABILITY AND REACTIVITY - - - - - -
STABILITY
STABLE.
INCOMPATIBILITIES
OXIDIZING AGENTS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
CARBON MONOXIDE, CARBON DIOXIDE
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - TOXICOLOGICAL INFORMATION - - - - - -
ACUTE EFFECTS
CHRONIC COPPER POISONING IS TYPIFIED BY HEPATIC CIRRHOSIS, BRAIN
DAMAGE AND DEMYELINATION, KIDNEY DEFECTS, AND COPPER DEPOSITION IN THE
CORNEA AS EXEMPLIFIED BY HUMANS WITH WILSON’S DISEASE. IT HAS ALSO
BEEN REPORTED THAT COPPER POISONING HAS LEAD TO HEMOLYTIC ANEMIA AND
ACCELERATES ARTERIOSCLEROSIS.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
VOMITING.
EXPOSURE CAN CAUSE:
GASTROINTESTINAL DISTURBANCES
BLOOD EFFECTS
DAMAGE TO THE LIVER
DAMAGE TO THE LUNGS
CAUSES SKIN IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
CAUSES EYE IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
MAY BE HARMFUL IF INHALED.
HARMFUL IF SWALLOWED.
CHRONIC EFFECTS
TARGET ORGAN(S):
LIVER
LUNGS
RTECS #: AG3500000
ACETIC ACID, COPPER(2+) SALT, MONOHYDRATE
TOXICITY DATA
ORL-RAT LD50: 710 MG/KG  AIHAAP 30,470,1969
IPR-MAM LD50: 5 MG/KG

TARGET ORGAN DATA

BEHAVIORAL (SOMNOLENCE)

GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY GLANDS)

GASTROINTESTINAL (NAUSEA OR VOMITING)

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 - - - - - - - - - -

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

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-WASTE SITE. DESTROY ANY EXCESS SULFIDE WITH SODIUM HYPOCHLORITE.

NEUTRALIZE THE SOLUTION BEFORE FLUSHING DOWN THE DRAIN.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - - -

CONTACT FLUKA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

EUROPEAN INFORMATION

CAUTION: SUBSTANCE NOT YET FULLY TESTED.

HARMFUL

R 22

HARMFUL IF SWALLOWED.

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

OEL-ARAB REPUBLIC OF EGYPT: TWA 0.1 MG(CU)/M3 (FUME), JAN1993

OEL-AUSTRALIA: TWA 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-AUSTRALIA: TWA 1 MG(CU)/M3 (DUST), JAN1993

OEL-BELGIUM: TWA 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-BELGIUM: TWA 1 MG(CU)/M3 (DUST), JAN1993

OEL-FINLAND: TWA 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-FINLAND: TWA 1 MG(CU)/M3, JAN1993

OEL-FRANCE: VME 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-FRANCE: VME 1 MG(CU)/M3, STEL 2 MG(CU)/M3 (DUST), JAN1993

OEL-GERMANY: MAK 0.1 MG(CU)/M3 (FUME), JAN1999

OEL-GERMANY: MAK 1 MG(CU)/M3 (DUST), JAN1999

OEL-HUNGARY: TWA 0.2 MG(CU)/M3, STEL 0.4 MG(CU)/M3 (DUST), JAN1993

OEL-INDIA: TWA 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-THE NETHERLANDS: MAC-TGG 02 MG(CU)/M3 (FUME), JAN1999

OEL-THE NETHERLANDS: MAC-TGG 1 MG(CU)/M3 (DUST), JAN1999

OEL-THE PHILIPPINES: TWA 1.0 MG(CU)/M3 (FUME), JAN1993

OEL-RUSSIA: STEL 0.5 PPM (1 MG(CU)/M3) (DUST), JAN1993

OEL-SWEDEN: NGV 0.2 MG(CU)/M3 (RESP. DUST), JAN1999

OEL-SWEDEN: NGV 1 MG(CU)/M3 (TOTAL DUST), JAN1999

OEL-SWITZERLAND: MAK-W 1 MG(CU)/M3, STEL 1 MG(CU)/M3, JAN1999

OEL-THAILAND: TWA 0.1 MG(CU)/M3 (FUME), JAN1993

OEL-THAILAND: TWA 1 MG(CU)/M3, JAN1993

OEL-UNITED KINGDOM: LTEL 0.2 MG(CU)/M3 (FUME), JAN1993

OEL-UNITED KINGDOM: LTEL 1 MG(CU)/M3, JAN1993

NOES 1983: HZD X4554; NIS 3; TNF 1064; NOS 8; TNE 6695; TFE 2725
U.S. INFORMATION
   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, ALDRICH,
   FLUKA 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.
   COPYRIGHT 2001 SIGMA-ALDRICH CO.
   LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY