

COPPER SULFATE BRON

P17

REVISION OF: 04-03-90

ROOTROL - HJH# 80-155

SHIP TO:

HJH CORPORATION

P.O. BOX 410107

KCMO 64141

17007963
MILAND METALS
ATTN: PURCHASING AGENT
DIV HJ HOBES & CO
1219 LYDIA AVE
KANSAS CITY MO 64106

ORDER NO: 170511364
PROD NO: 04199106

VAN WATERS & ROGERS INC., SUBSIDIARY OF UNIVAR
1600 HORTON BLVD. SEATTLE, WA 98104-1564 (408) 435-8700

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC, (800) 424-9300

-----FOR PRODUCT AND SALES INFORMATION-----

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE

-----PRODUCT IDENTIFICATION-----

PRODUCT NAME: COPPER SULFATE PENTAHYDRATE CAS NO.: A-7758-99-8
COMMON NAMES/SYNONYMS: BLUE VITRIOL; UNAR CODE: P1352
COPPER SULFATE PENTAHYDRATE; CUPRIC
SULFATE PENTAHYDRATE; COPPER SULFATE INSTANT;
COPPER SULFATE BASIC; COPPER SULFATE K50 FEED
G COPPER SULFATE INSTANT PD; COPPER
SULFATE CRYSTAL; CUPRIC SULFATE PENTAHYDRATE

FORMULA: A-CMSO4.5H2O
B-CUSO4

DATE ISSUED: 08/90

HAZARD RATING (NEPA 704)

SUPERCEDES: 08/90

HEALTH: 3

HAZARD RATING SCALE:

FIRE: 0

0=MINIMAL

3=SERIOUS

REACTIVITY: 0

1=SLIGHT

4=SEVERE

SPECIAL: CORROSIVE

2=MODERATE

-----HAZARDOUS INGREDIENTS-----

COMPONENT	%	EXPOSURE LIMITS, MG/M3			HAZARD
		OSHA PEL	ACGIH TLV	OTHER LIMIT	
COPPER SULFATE	>99	1	NONE	NONE	TOXIC; CORROSIVE
PENTAHYDRATE		(CU)			

MAY CONTAIN IRON, ZINC, AND OTHER TRACE METAL AND MINERAL IMPURITIES

NOTE: A-COPPER SULFATE PENTAHYDRATE
B-COPPER SULFATE CRYSTAL

-----PHYSICAL PROPERTIES-----

BOILING POINT, DEG F: 1,207(DEC) VAPOR PRESSURE, MM HG/20 DEG C: N/A
MELTING POINT, DEG F: 302(DEHYDRATES) VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY (WATER=1): A-2.28 WATER SOLUBILITY, %: 30
B-3.603
APPEARANCE AND ODOR: BLUE EVAPORATION RATE (BUTYL ACETATE=1): N/A
CRYSTALLINE POWDER OR CRYSTALS;
OR LESS.

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COPPER SULFATE GRAN

REVISION 04-04-90

-----FIRST AID MEASURES-----

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY FLUSH SKIN WITH LOTS OF RUNNING WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET IMMEDIATE MEDICAL ATTENTION.

IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING LARGE QUANTITIES OF MILK OR EGG WHITES, OR IF NOT AVAILABLE, WATER, AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-----HEALTH HAZARD INFORMATION-----

PRIMARY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: BREATHING DUST OR MISTS MAY IRRITATE THE NOSE, THROAT AND MUCOUS MEMBRANES OF THE RESPIRATORY TRACT AND CAUSE COUGHING AND CHEST DISCOMFORT.

EYE CONTACT: LIQUID AND MISTS MAY SEVERELY IRRITATE OR DAMAGE THE EYES.

SKIN CONTACT: CONTACT WITH THE DUST OR SOLUTIONS MAY IRRITATE THE SKIN.

SWALLOWED: INGESTION OF A LARGE QUANTITY OF COPPER SULFATE HAS CAUSED VOMITING, GASTRIC PAIN, DIZZINESS, EXHAUSTION, ANEMIA, CRAMPS, CONVULSIONS, SHOCK, COMA AND DEATH.

CHRONIC EFFECTS OF EXPOSURE: DAMAGE TO THE NERVOUS SYSTEM AND KIDNEY HAVE BEEN RECORDED, JAUNDICE AND LIVER ENLARGEMENT HAVE ALSO BEEN OBSERVED.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: GASTROINTESTINAL AILMENTS.

-----TOXICITY DATA-----

ORAL: HUMAN LDLO = 1,038 MG/KG (HYDRATE); HUMAN LDLO = 50 MG/KG (ANHYDROUS); RAT LD50 = 300 MG/KG (ANHYDROUS & HYDRATE)

DERMAL: NO DATA FOUND

INHALATION: NO DATA FOUND

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: THERE HAS BEEN REPORTED AN EXCESS OF CANCER CASES IN THE COPPER SMELTING INDUSTRY.

-----PERSONAL PROTECTION-----

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING DUST EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THE DUST CONCENTRATION AT THE POINT OF USE. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR WITH PARTICULATE FILTERS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

COPPER SULFATE (PENTAHYDRATE)

PROTECTION: CHUCKLED GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

-----FIRE AND EXPLOSION INFORMATION-----

FLASH POINT, DEG F: N/A FLAMMABLE LIMITS IN AIR, %
METHOD USED: N/A LOWER: N/A UPPER: N/A
EXTINGUISHING MEDIA: THIS MATERIAL IS NOT COMBUSTIBLE. USE ANY APPROPRIATE MEDIUM FOR EXTINGUISHING SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF IGNITION SINCE VAPORS DECOMPOSE TO HAZARDOUS PRODUCTS AT HIGH TEMPERATURES.

-----HAZARDOUS REACTIVITY-----

STABILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HIGH TEMPERATURES.

MATERIALS TO AVOID: HYDROXYLAMINE, MAGNESIUM, ALUMINUM POWDER, ACETYLENE GAS AND MOIST AIR.

HAZARDOUS DECOMPOSITION PRODUCTS: WILL LIBERATE TOXIC FUMES OF SULFUR DIOXIDE.

-----SPILL, LEAK, AND DISPOSAL PROCEDURES-----

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED WITH PARTICULATE FILTERS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. FOR SMALL SPILLS, SWEEP UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, SHOVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF DRAINS, STORM DRAINS, SURFACE WATERS, AND SOIL. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

-----SPECIAL PRECAUTIONS-----

STORAGE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. KEEP BAGS OR FIBER DRUMS DRY AT ALL TIMES. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL NEAR OR ON THIS CONTAINER.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL CONTAIN PRODUCT RESIDUE. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

COPPER SULFATE PENTAHYDRATE

03/90: ADDED SYNONYM.

-----FOR ADDITIONAL INFORMATION-----

CONTACT MSDS COORDINATOR, VAN WATERS & ROGERS INC.,
DURING BUSINESS HOURS, PACIFIC TIME (408)883 8700

-----OTHER REGULATORY INFORMATION-----

DO NOT DETACH THIS SECTION FROM THE MSDS AND BE SURE TO
INCLUDE THIS SECTION WHEN COPYING THE MSDS.

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE
REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND
AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

NAME	CAS NO.	% WT
COPPER SULFATE	7758-98-7	>99
COPPER SULFATE PENTAHYDRATE	7758-99-8	>99

UNDER THE PENNSYLVANIA RIGHT-TO-KNOW LAW, HAZARDOUS SUBSTANCES AND
SPECIAL HAZARDOUS SUBSTANCES COMPONENTS PRESENT IN THIS PRODUCT WHICH
REQUIRE REPORTING ARE:

HAZARDOUS SUBSTANCES CHEMICAL	CAS NO.	CONCENTRATION (>=1%)
COPPER SULFATE	7758-98-7	>99

CALIFORNIA SCARD: NONE

THE COMPONENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY OF CHEMICAL
SUBSTANCES.

-----NOTICE-----

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OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED HEREIN.**

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INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT
RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER
PROCESS.

-----REVISION-----

03/90: ADDED SYNONYM.

REVISED OTHER REGULATORY INFORMATION.

**** E N D O F M S D S ****

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