Product ID:C-575, COPPER MSDS Date:06/27/1989

FSC:6810

NIIN:00-974-3626

MSDS Number: BPKPC === Responsible Party ===

Company Name: FISHER SCIENTIFIC

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ ZIP:07410 Country:US

Info Phone Num:201-796-7100

Emergency Phone Num:201-796-7100;800-424-9300(CHEMTREC)

CAGE:1B46

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=== Contractor Identification ===

Company Name: FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

Box:City:FAIRLAWN

State:NJ

ZIP:07410-2802 Country:US

Phone:201-796-7100

CAGE:1B464

======= Composition/Information on Ingredients ========

Ingred Name: COPPER

CAS:7440-50-8

RTECS #:GL5325000 Fraction by Wt: 100%

OSHA PEL:0.1MG/M3FUME, 1 DUST ACGIH TLV:0.2MG/M3FUME, 1 DUST

EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS

Ingred Name:SUPP DATA: DEGENERATION &/OR DETACHMENT OF RET

INA & ATROPHY
OF GLOBE. CHRONIC:RPTD/PRLNG EXPOS TO IRRITANT MAY (ING 3)
RTECS #:9999992Z

Ingred Name:ING 02:CAUSE CONJ. INGEST(ACUTE): 120 UG/KG INGESTED BY HUMAN CAUSED GI DISORDER W/NAUS & VOMIT. (CHRONIC): PRLNG(ING 4) RTECS #:9999999ZZ

Ingred Name:ING 3:INGEST THRU DIET IS NOT KNOWN TO CAUSE TOX EFTS EXCEPT IN PEOPLE W/RECESSIVE GENE DISORDER TERMED WILSON'S (ING 5) RTECS #:9999992Z

Ingred Name:ING 4:DISEASE WHICH CAUSE AN ABNORMALLY HIGH ABSORP, RETENTION & STOR OF COP
PER BY BODY. DISEASE MAY CAUSE DYSFUNC(ING6)
RTECS #:9999992Z

Ingred Name:ING 5:& STRUCTURAL DAM TO LIVER/CNS, KIDNEY, BONES & EYES.
DISEASE IS USUALLY PROGRESSIVE & MAY BE FATAL IF LEFT (ING 7)
RTECS #:9999992Z

Ingred Name:ING 6:UNTREATED. FOR MORE EXACTING INFO CONCERNING HEALTH HAZARDS, CONTACT NEHC.

RTECS #:9999992Z

Ingred Name:FIRST AID PROC:OCCAS LIFT LIDS, UNTIL NO EVIDENCE OF CHEM REMAINS FOR @ LST 15 MIN. GET MED ATTN IMMED. INGEST: (ING 9) RTECS #:9999999ZZ

Ingred N

ame:ING 8: VOMIT/DRINK ANYTHING BY MOUTH. GIVE ACTIVATED CHARCOAL. GIVE O\*2 IF RESP IS DEPRESSED. MAINTAIN AIRWAY (ING 10) RTECS #:9999999ZZ

Ingred Name:ING 9:& BLOOD PRESS. GET MED ATTN. LAVAGE/O\*2 MUST BE ADMIN BY QUALIFIED MED PERS. COPPER POISONING: GIVE (ING 11) RTECS #:9999997ZZ

Ingred Name:ING 10: CALCIUM DISODIUM EDETATE 15-25 MG/KG (0.08-0.125 ML OF 20% SOLN PER KILOGRAM BODY WT). IN 250-500 ML (ING 12) RTECS #:9999992Z

Ingred Name: ING 11:OF 5% DEXTROSE INTRAVENOUSLY OVE

R A 1-2 HR PERIOD
TWICE DAILY. MAX DOSE SHOULD NOT EXCEED 50 MG/KG/DAY. (ING 13)
RTECS #:9999992Z

Ingred Name:ING 12:DRUG SHOULD BE GIVEN IN 5 DAY COURSES W/REST PERIOD OF @ LST 2 DAYS BETWEEN COURSES. AFTER FIRST (ING 14) RTECS #:9999999ZZ

Ingred Name:ING 13:COURSE, SUBSEQUENT COURSES SHOULD NOT EXCEED 50 MG/KG/DAY. DAILY URINALYSIS SHOULD NOT BE DONE DURING (ING 15) RTECS #:9999999ZZ

Ingred Name:ING 14:TRTMT PERIOD. DOSAGE SHOULD BE REDUCED IF ANY UNUSUAL URINE FINDINGS APP EAR. INTRAVENOUS ADMIN IS (ING 16) RTECS #:9999992Z

Ingred Name:ING 15:CONTRAINDICATED IN PRESENCE OF ELEVATED CEREBROSPINAL FLUID PRESS. PENICILLAMINE IS ALSO EFTIVE IN COPPER(ING 17)
RTECS #:9999992Z

Ingred Name:ING 16:POISONING. GIVE UP TO 100 MG/KG/DAY MAX (MAX 1 G/DAY) DIVIDED INTO 4 DOSES FOR NO LONGER THAN 2 WK. IF (ING 18) RTECS #:9999992Z

Ingred Name:ING 17:LONGER ADMIN PERIOD IS WARRANTED, DOSAGE SHOULD NOT EXCEED 40 MG/KG/DAY. GIVE DRUG ORALLY, HALF AN HR (ING 19)

RTECS #:9999999ZZ

Ingred Name:ING 18:BEFORE MEALS. ANTIDOTE SHOULD BE ADMINISTERED BY QUALIFIED MEDICAL PERSONNEL. RTECS #:9999999ZZ

Ingred Name:SPILL PROC: AREA! KEEP UNNEC PEOPLE AWAY. ISOLATE HAZ AREA & DENY ENTRY. RESIDUE SHOULD BE CLEANED UP USING (ING 21) RTECS #:9999992Z

Ingred Name:ING 20:HIGH-EFFICIENCY PARTICULATE FILTER VACUUM. RTECS #:9999999ZZ

Ingred Name:WASTE DISP METH: FOR ASSISTANCE, CONTACT DISTRICT DIRECTOR OF THE ENVIRONMENTAL PROTECTION AGENCY.
RTECS #:999

Ingred Name: RESP PROT: SELECTIONS, CONTACT NEHC. RTECS #:9999999ZZ LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER. Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: COPPER IS AN EYE & MUC MEMB IRRITANT. POISON MAY AFFECT LIVER & KIDNEYS. INHAL:(ACUTE): POWDERED DUST MAY CAUSE IRRIT OF UPPER RESP TRACT & ULCERATION & PERFORATION OF NASAL SEPTUM. COPPER FUMES MAY C AUSE METAL FUME FEVER. CHRONIC: PRLNG INDUST EXPOS MAY CAUSE A GREEN DISCOLORATION SKIN, HAIR, TEETH. (EFTS OF OVEREXP) Explanation of Carcinogenicity:NOT RELEVANT Effects of Overexposure: HLTH HAZ: WELDERS EXPOS TO COPPER FUME EXPER ATROPHIC RHINITIS, METALLIC TASTE, RUNNY NOSE, & MUCOSAL IRRIT OF MOUTH & EYES. SKIN: (ACUTE):MAY BE IRRITATING & CAUSE KERATINIZATION. ALLERGIC DERM HAS BE EN RPTD. CHRONIC: RPTD/PRLNG **CONT M** AY CAUSE IRRIT & DISCOLORATION OF SKIN. EYE: (ACUTE): DUST CAN CAUSE IRRIT(SUPP DATA) Medical Cond Aggravated by Exposure: PERSONS W/PRE-EXISTING RESPIRATORY, LIVER, KIDNEY, SKIN & BLOOD DISORDERS/WILSON'S DISEASE MAY BE @ INCREASED RISK FROM EXPOSURE. First Aid:INHAL: REMOVE FROM EXPOS TO FRESH AIR IMMED. IF BRTHG HAS STOPPED, PERFORM ARTF RESP. KEEP WARM & @ REST. TREAT SYMPTOMATICALLY & SUPPORTIVELY. GET MED ATTN IMMED. SKIN: REMOVE CONTAMD CLTHG & SHOES I MMED. WASH AFFECTED AREA W/SOAP/MILD DETERGENT & LG AMTS OF H\*20 UNTIL NO EVIDENCE OF CHEM REMAINS (APPROX 15-20 MIN). GET MED ATTN IMMED. EYE: WASH IMMED W/LG AMTS OF H\*20/NORM SALINE, (ING 8)

Flash Point:FLAMMABLE(DUST)

Extinguishing Media: USE DRY SAND/DOLOMITE, GRAPHITE, SODIUM CHLORIDE, SODA ASH/APPROP METAL-EXTING POWDER. DO NOT APPLY H\*20 TO (SUPP

DATA)

Fire Fighting Procedures:NIOSH/MSHA APPRVD SCBA & FULL PROT EQUIP. MOVE CONTR FROM FIRE AREA IF POSS. COOL CONTR EXPOS TO FLAME W/H\*20 FROM SIDE UNTIL FIRE IS OUT. (SUPP DATA)

Unusual Fire/Explosion Hazard:NEGLIGIBLE FIRE HAZARD IN METALLIC FORM; HOWEVER, DUST, POWDER, OR FUMES ARE FLAMMABLE OR EXPLOSIVE WHEN EXPOSED TO HEAT OR FLAMES.

========= Accidental Release Measures ============

Spill Release Procedures: SHUT OFF IGNIT SOURCES. DO NOT TOUCH SPILLED

MATL. FOR SM SPILLS, W/CLEAN SHOVEL, PLACE MATL INTO CLEAN, DRY CONTR & COVER; MOVE CONTR FROM SPILL AREA. FOR LGR SPILLS, WET DOWN W/H\*2O & DIKE FOR LATER DISP. NO SMOKING, FLAMES/FLARES IN HAZ(ING 20)

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

========== Handling and Storage ==============

Handling and Storage Precautions:STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

Other Precautions: KEEP AWAY FROM SPARKS OR IGNITION SOURCES.

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Exposure Controls/Personal Protection ========

Respiratory Protection:SPEC RESP SELECTED MUST BE BASED ON CONTAM LEVELS FOUND IN WORKPLACE, MUST NOT EXCEED WORKING LIM OF RESP & BE JOINTLY APPRVD BY NATL INSTITUTE FOR OCCUP SFTY & HLTH & MINE SFTY & HLTH ADMIN NIOSH-MSH A. FOR INFO CONCERNING RESP (ING 23)

Ventilation:PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PUBLISHED EXPOSURE LIMITS.

Protective Gloves: IMPERVIOUS GLOVES.

Eve Protection: CHEMICAL WORKERS GOGGLES.

Other Protective Equipment: APPROP PROT (IMPERVIOUS) CLTHG & EQUIP TO PREVENT REPEATED OR PROLONGED SKIN CONTACT WITH THIS SUBSTANCE.

Work Hygienic Practices: CONTACT LENSES SHOULD NOT BE WORN.

Supplemental Safety and Health

EXTING MEDIA: BURNING MATL. FIRE FIGHT PROC: STAY AWAY FROM STOR TANK ENDS. FOR MASSIVE FIRE IN CARGO AREA, USE UNMANNED HOSE HOLDER/MONITOR NOZZ, ELSE W/DRAW & LET FIRE BURN. EFTS OF OVEREXP: W/RED & PAIN. COPPER PARTICLES IN EYE MAY RSLTIN FOREIGN BODY R

## ESPONSE W/CHARACT DISCOLORATION OF OCULAR TISSUE, (ING 2) ========= Physical/Chemical Properties ============ Boiling Pt:B.P. Text:4653F,2567C Melt/Freeze Pt:M.P/F.P Text:1946F,1063C Vapor Pres:1@1628C Spec Gravity:8.92 Solubility in Water: INSOLUBLE Appearance and Odor: REDDISH, DUCTILE, MALLEABLE, LUSTROUS METAL OR CUBIC CRYSTALS. ======== Stability and Reactivity Data ========== Stability Indicator/Materials to Avoid:YES ACETYLENE, CHLORINE, FLUORINE, LEAD AZIDE, SULFURIC ACID. FOR MORE EXACTING LIST OF MATL TO AVOID, CONT NEHC. Stability Condition to Avoid: AVOID DISPERSION OF DUST IN AIR. FINELY DIVIDED PARTICLES, DUST/FUMES MAY BE FLAMM/EXPLOS. Hazardous Decomposition Products: THERMAL DECOMPOSITION MAY RELEASE TOXIC &/OR HAZARDOUS GASES. ======= Disposal Considerations ============ Waste Disposal Methods: REPORATABLE QTY: 5000 PDS. IF REL OF SUBSTANCE IS REPORTABLE UNDER CERCLA SEC 103, NATL RESPONSE CTR MUST BE NOTIFIED IMMED @ (800)424-9300/(202) 426-2675 IN METROPOLITAN WASHINGTON, D.C. AREA (40 CFR 302.6) OBSERVE ALL FED/ST/LOC REGS. (ING22) Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and

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