

Sigma Chemical Co.
P.O. Box 14508
St. Louis, MO 63178
Phone: 314-771-5765

Aldrich Chemical Co., Inc.
1001 West St. Paul
Milwaukee, WI 53233
Phone: 414-273-3850

Fluka Chemical Corp.
1001 West St. Paul
Milwaukee, WI 53233
Phone: 414-273-3850

SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

CATALOG #: 61139
NAME: COPPER, TURNINGS

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 7440-50-8
MF: CU
EC NO: 231-159-6

SYNONYMS

ALLBRI NATURAL COPPER * ANAC 110 * ARWOOD COPPER * BRONZE POWDER *
CDA 101 * CDA 102 * CDA 110 * CDA 122 * C.I. 77400 * C.I. PIGMENT
METAL 2 * COPPER (ACGIH:OSHA) * COPPER-AIRBORNE * COPPER BRONZE *
COPPER-MILLED * COPPER SLAG-AIRBORNE * COPPER SLAG-MILLED * 1721 GOLD
* GOLD BRONZE * KAFAR COPPER * M 1 * M 3 * M 4 * M1 (COPPER) * M2
(COPPER) * M3 (COPPER) * M4 (COPPER) * M3R * M3S * OFHC CU * RANEY
COPPER *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

IRRITANT
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION.
SENSITIVE TO AIR
KEEP TIGHTLY CLOSED.
STORE UNDER NITROGEN.

SECTION 4. - - - - - FIRST-AID MEASURES- - - - -

CONTAMINATION OF THE EYES SHOULD BE TREATED BY IMMEDIATE AND PROLONGED
IRRIGATION WITH COPIOUS AMOUNTS OF WATER.
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS
AMOUNTS OF WATER.
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.
REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.

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

EXTINGUISHING MEDIA
DRY CHEMICAL POWDER.
DO NOT USE WATER.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
FLAMMABLE SOLID.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

THIS MATERIAL, LIKE MOST MATERIALS IN POWDER FORM, IS CAPABLE OF
CREATING A DUST EXPLOSION.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

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

EVACUATE AREA.

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.

USE NONSPARKING TOOLS.

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.

NIOSH/MSHA-APPROVED RESPIRATOR.

MECHANICAL EXHAUST REQUIRED.

DO NOT BREATHE DUST.

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

IRRITANT.

KEEP TIGHTLY CLOSED.

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

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

APPEARANCE AND ODOR

COPPER-COLORED TURNINGS

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

STABILITY

STABLE.

INCOMPATIBILITIES

STRONG ACIDS

STRONG OXIDIZING AGENTS

ACID CHLORIDES

HALOGENS

MAY DISCOLOR ON EXPOSURE TO AIR AND MOISTURE.

VIOLENT REACTION MAY OCCUR WITH ACETYLENE, AMMONIUM NITRATE, BROMATES, CHLORATES, IODATES, CHLORINE, CHLORINE TRIFLUORIDE, ETHYLENE OXIDE, FLUORINE, HYDROGEN PEROXIDE, HYDRAZINE MONONITRITE, HYDROGEN SULFIDE, HYDRAZOIC ACID, LEAD AZIDE, POTASSIUM PEROXIDE, SODIUM AZIDE, AND SODIUM PEROXIDE. REACTION OF COPPER WOOL, TRICHLOROACETIC ACID IN DIMETHYL SULFOXIDE IS VERY EXOTHERMIC.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

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

ACUTE EFFECTS

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.

CAUSES EYE AND SKIN IRRITATION.

MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

EXPOSURE CAN CAUSE:

DAMAGE TO THE LUNGS

STOMACH PAINS, VOMITING, DIARRHEA.

BLOOD EFFECTS

ADDITIONAL INFORMATION

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.

RTECS #: GL5325000

COPPER

TOXICITY DATA

IPR-MUS LD50:3500 UG/KG

38MKAJ 2A,1623,1981

TARGET ORGAN DATA

LUNGS, THORAX OR RESPIRATION (FIBROSIS, FOCAL)

LUNGS, THORAX OR RESPIRATION (TUMORS)

GASTROINTESTINAL (NAUSEA OR VOMITING)

MATERNAL EFFECTS (UTERUS, CERVIX, VAGINA)

EFFECTS ON FERTILITY (FEMALE FERTILITY INDEX)

EFFECTS ON FERTILITY (PRE-IMPLANTATION MORTALITY)

EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)

EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (CENTRAL NERVOUS SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)

TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)

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 - - - - -
MATERIAL IN THE ELEMENTAL STATE SHOULD BE RECOVERED FOR REUSE OR RECYCLING.

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

IRRITANT

R 36/37/38

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 26

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

S 37/39

WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-TWA 1 MG(CU)/M3, DUST, MIST

DTLVS* TLV/BEI,1996

ACGIH TLV-TWA 0.2 MG(CU)/M3, FUME

DTLVS* TLV/BEI,1996

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,7740,1989

MSHA STANDARD-AIR:TWA 0.1 MG/M3 (FUME,DUSTS & MISTS)

DTLVS* 3,59,1971

OSHA PEL (GEN INDU):8H TWA 0.1 MG(CU)/M3, FUME

CFRGR 29,1910.1000,1994

OSHA PEL (GEN INDU):8H TWA 1 MG(CU)/M3, DUSTS AND MISTS

CFRGR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 0.1 MG(CU)/M3, FUME

CFRGR 29,1926.55,1994

OSHA PEL (CONSTRUC):8H TWA 1 MG(CU)/M3, DUSTS AND MISTS

CFRGR 29,1926.55,1994

OSHA PEL (SHIPYARD):8H TWA 0.1 MG(CU)/M3, FUME

CFRGR 29,1915.1000,1993

OSHA PEL (SHIPYARD):8H TWA 1 MG(CU)/M3, DUSTS AND MISTS
CFRGR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 0.1 MG/M3, FUME
CFRGR 41,50-204.50,1994
OSHA PEL (FED CONT):8H TWA 1 MG/M3, DUSTS AND MISTS
CFRGR 41,50-204.50,1994
OEL-ARAB REPUBLIC OF EGYPT:TWA 0.1 MG/M3 (FUME) JAN 1993
OEL-AUSTRALIA:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-AUSTRALIA:TWA 1 MG/M3 (DUST) JAN 1993
OEL-BELGIUM:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-BELGIUM:TWA 1 MG/M3 (DUST) JAN 1993
OEL-DENMARK:TWA 0.1 MG/M3 (FUME) JAN 1993
OEL-DENMARK:TWA 1 MG/M3 (DUST) JAN 1993
OEL-FINLAND:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-FINLAND:TWA 1 MG/M3 (DUST) JAN 1993
OEL-FRANCE:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-FRANCE:TWA 1 MG/M3;STEL 2 MG/M3 (DUST) JAN 1993
OEL-GERMANY:TWA 0.1 MG/M3 (FUME) JAN 1993
OEL-GERMANY:TWA 1 MG/M3 (DUST) JAN 1993
OEL-HUNGARY:TWA 0.2 MG/M3;STEL 0.4 MG/M3 (DUST) JAN 1993
OEL-INDIA:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-THE NETHERLANDS:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-THE NETHERLANDS:TWA 1 MG/M3 (DUST) JAN 1993
OEL-THE PHILIPPINES:TWA 1.0 MG/M3 (FUME) JAN 1993
OEL-POLAND:TWA 0.1 MG/M3 (FUME) JAN 1993
OEL-RUSSIA:STEL 0.5 PPM (1 MG/M3) (DUST) JAN 1993
OEL-SWEDEN:TWA 0.2 MG/M3 (RESP. DUST) JAN 1993
OEL-SWEDEN:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-SWEDEN:TWA 1 MG/M3 (TOTAL DUST) JAN 1993
OEL-SWITZERLAND:TWA 0.1 MG/M3;STEL 0.2 MG/M3 (FUME) JAN 1993
OEL-SWITZERLAND:TWA 1 MG/M3;STEL 1 MG/M3 JAN 1993
OEL-THAILAND:TWA 0.1 MG/M3 (FUME) JAN 1993
OEL-THAILAND:TWA 1 MG/M3 JAN 1993
OEL-UNITED KINGDOM:TWA 0.2 MG/M3 (FUME) JAN 1993
OEL-UNITED KINGDOM:TWA 1 MG/M3 JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO COPPER, DUSTS AND MISTS-AIR:10H TWA 1 MG/M3
NIOSH* DHHS #92-100,1992
NIOSH REL TO COPPER, FUME-AIR:10H TWA 0.1 MG/M3
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD M2276; NIS 27; TNF 1213; NOS 35; TNE 24737
NOHS 1974: HZD 20115; NIS 176; TNF 12177; NOS 105; TNE 224406
NOES 1983: HZD X5915; NIS 5; TNF 162; NOS 5; TNE 11889; TFE 421
NOES 1983: HZD X5983; NIS 51; TNF 4558; NOS 45; TNE 53282; TFE 8758
NOES 1983: HZD X6807; NIS 2; TNF 16; NOS 2; TNE 625
NOES 1983: HZD X8588; NIS 3; TNF 204; NOS 7; TNE 9443
NOES 1983: HZD 20115; NIS 296; TNF 59839; NOS 158; TNE 920449; TFE
72821
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, APRIL 1997
NIOSH ANALYTICAL METHOD, 1994: ELEMENTS BY ICP, 7300
NIOSH ANALYTICAL METHOD, 1994: COPPER (DUST AND FUME), 7029
NIOSH ANALYTICAL METHOD, 1994: ELEMENTS IN BLOOD OR TISSUE, 8005
NIOSH ANALYTICAL METHOD, 1994: METALS IN URINE, 8310

OSHA ANALYTICAL METHOD #ID-125G

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - OTHER INFORMATION- - - - -

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