ATTN: SAFETY DIRECTOR
STEVEN ANDERSON
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WHITewater WI 53190

ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

EMERGENCY PHONE 1-414-273-3850
DATE 01/11/99
CUST#: 523216
PO#: CC/ONSrud

MATERIAL SAFETY DATA SHEET PAGE 1

SECTION 1. - - - - - - CHEMICAL IDENTIFICATION - - - - - - - - -
CATALOG #: 32702-6
NAME: SILVER, WIRE, 0.5MM DIAM., 99.9%

SECTION 2. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -
CAS #: 7440-22-4
MF: Ag
EC NO: 231-131-3
SYNONYMS
ARGENTUM * C.I. 77820 * L-3 * SHELL SILVER * SILBER (GERMAN) * SILVER (ACGIH:OSHA) * SILVER ATOM *

SECTION 3. - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
TOXIC
TOXIC IF SWALLOWED.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
AIR SENSITIVE

SECTION 4. - - - - - - FIRST-AID MEASURES - - - - - - - - -
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
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.

SECTION 5. - - - - - - FIRE FIGHTING MEASURES - - - - - - - - -
EXTINGUISHING MEDIA
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

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

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CATERG #: 32702-6
NAME: SILVER, WIRE, 0.5MM DIAM., 99.9%

SECTION 7. HANDLING AND STORAGE-
REFER TO SECTION 8.

SECTION 8. EXPOSURE CONTROLS/PERSOAL PROTECTION-
CHEMICAL SAFETY GOGGLES.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
MECHANICAL EXHAUST REQUIRED.
NIOSH/MSHA-APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH.
AVOID CONTACT AND INHALATION.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
TOXIC.
KEEP TIGHTLY CLOSED.
AIR SENSITIVE

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES-
APPEARANCE AND ODOR
SILVER WIRE

SECTION 10. STABILITY AND REACTIVITY-
INCOMPATIBILITIES
STRONG ACIDS
STRONG BASES
OXYGEN
SENSITIVE TO AIR

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

SECTION 11. TOXICOLOGICAL INFORMATION-
ACUTE EFFECTS
HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF INHALED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
MAY CAUSE EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
MATERIAL MAY BE IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
MAY CAUSE ARGYRIA (A SLATE-GRAY OR BLUIS DISCOLORATION OF THE SKIN AND DEEP TISSUES DUE TO THE DEPOSIT OF INSOLUBLE ALUMINATE OF SILVER).
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: VW3500000

CONTINUED ON NEXT PAGE
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TARGET ORGAN DATA
TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)
TUMORIGENIC (TUMORS AT SITE OF APPLICATION)

ADDITIONAL INFORMATION
ORL-MUS LD50: 100 MG/KG
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 ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. REGULATORY INFORMATION

EUROPEAN INFORMATION
TOXIC
R 25
TOXIC IF SWALLOWED.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
S 36/37/39
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS
OEL-MAK
ACGIH TLV-TWA 0.1 MG/M3, DUST, FUME
DTLV/BEI 1997
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION
FIREAC 54, 7740, 1989
MSHA STANDARD-AIR TWA 0.01 MG/M3
DTLV'S* 3, 231, 1971
OSHA PEL (GEN'INDU): 8H TWA 0.01 MG(AG)/M3
CFRGR 29, 1910, 1000, 1994
OSHA PEL (CONSTRUC): 8H TWA 0.01 MG(AG)/M3
CFRGR 29, 1926, 55, 1994
OSHA PEL (SHIPYARD): 8H TWA 0.01 MG(AG)/M3

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We are Committed to the Success of our Customers through Science, Technology and Service.
ALDRICH CHEMICAL COMPANY, INC.
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MATERIAL SAFETY DATA SHEET

CATALOG #: 32702-6
NAME: SILVER, WIRE, 0.5MM DIAM., 99.9%

CFRGR BR 29.1915.1000.1993
OSHA PEL (FED CONT): 8H TWA 0.01 MG(AG)/M3

CFRGR 41.50-204.50 1994
OEL-AUSTRALIA: TWA 0.1 MG/M3 JAN 1993
OEL-BELGIUM: TWA 0.1 MG/M3 JAN 1993
OEL-DENMARK: TWA 0.01 MG/M3 JAN 1993
OEL-FINLAND: TWA 0.1 MG/M3 JAN 1993
OEL-FRANCE: TWA 0.1 MG/M3 JAN 1993
OEL-GERMANY: TWA 0.01 MG/M3 JAN 1993
OEL-RUSSIA: STEL 1 MG/M3 JAN 1993
OEL-SWITZERLAND: TWA 0.01 MG/M3 JAN 1993
OEL-UNITED KINGDOM: TWA 0.1 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 SILVER, METAL AND SOLUBLE COMPDS-AIR: 10H TWA 0.01 MG/M3

NIOSH* DHHS #92-100, 1992
NOHS 1974: HDZ 68730; NIS 53; TNE 2163; NOS 54; TNE 19343
NOES 1983: HDZ M1804; NIS 4; TNE 156; NOS 9; TNE 3937; TFE 2435
NOES 1983: HDZ 68730; NIS 118; TNE 13582; NOS 76; TNE 204921; TFE 37439

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, JUNE 1998

NIOSH ANALYTICAL METHOD, 1994: ELEMENTS BY ICP, 7300
NIOSH ANALYTICAL METHOD, 1994: ELEMENTS IN BLOOD OR TISSUE, 8005
NIOSH ANALYTICAL METHOD #1D-125G

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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. ALDRICH SHALL NOT BE
HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH
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