

MATERIAL SAFETY DATA SHEET

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

CODE #: 0377
NAME: SILVER NITRATE

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

CHEMICAL NAME:	CAS#:	RTECS #:	%:
SILVER NITRATE	7761-88-8	VW4725000	>99.0

FOR MORE INFORMATION SEE COMPLETE RTECS ENTRY.

MF: AGNO3
EC NO: 231-853-9

SYNONYMS

LUNAR CAUSTIC * NITRATE D'ARGENT (FRENCH) * NITRIC ACID, SILVER(1+)
SALT * SILVER(1+) NITRATE * SILBERNITRAT * SILVER NITRATE (DOT) *
UN1493 (DOT) *

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

LABEL PRECAUTIONARY STATEMENTS

OXIDIZER
HIGHLY TOXIC
CORROSIVE
CAUSES BURNS
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
HARMFUL IF SWALLOWED.
TARGET ORGAN(S):

EYES
SKIN
THROAT
NASAL SEPTUM
FINGERNAILS

KEEP AWAY FROM COMBUSTIBLE MATERIAL.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.

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.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.
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.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

DISCARD CONTAMINATED SHOES.

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

EXTINGUISHING MEDIA

WATER SPRAY.

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.

CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

OXIDIZER.

CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

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.

AVOID RAISING DUST.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. ----- HANDLING AND STORAGE-----

REFER TO SECTION 8.

ADDITIONAL INFORMATION

INCOMPATIBLE WITH: CHLORIDES, CARBONATES, THIOCYANATES, FERROUS SALTS, CHLOROSULFONIC ACID, ARSENIC POWDER, CHLORINE TRIFLUORIDE OR PHOSPHONIUM IODIDE. SOLUTIONS OF SILVER NITRATE WITH AMMONIA, AMMONIA/SODIUM CARBONATE, OR AMMONIA/SODIUM HYDROXIDE HAVE HAD SEVERAL INSTANCES OF EXPLOSIONS REPORTED. REACTION WITH ACETALDEHYDE, ACETYLENE OR OTHER TERMINAL ALKYNES MAY PRODUCE EXPLOSIVE COMPOUNDS. A DRY MIXTURE OF POWDERED MAGNESIUM AND SILVER NITRATE HAS BEEN REPORTED TO IGNITE EXPLOSIVELY ON CONTACT WITH A DROP OF WATER. A MIXTURE WITH CHARCOAL IGNITES WHEN STRUCK, WHILE MIXTURES WITH PHOSPHOROUS OR SULFUR EXPLODE WHEN STRUCK. PASSAGE OF PHOSPHINE GAS INTO A SOLUTION OF SILVER NITRATE RESULTED IN AN EXPLOSION.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.

USE ONLY IN A CHEMICAL FUME HOOD.

SAFETY SHOWER AND EYE BATH.

FACESHIELD (8-INCH MINIMUM).

DO NOT BREATHE DUST.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

KEEP TIGHTLY CLOSED.

KEEP AWAY FROM COMBUSTIBLE MATERIALS, HEAT, SPARKS, AND OPEN FLAME.

MAY DEVELOP PRESSURE.

STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR

WHITE CRYSTALS

PHYSICAL PROPERTIES

MELTING POINT: 212 C

SPECIFIC GRAVITY: 4.352

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

STABILITY

STABLE.

INCOMPATIBILITIES

MOISTURE

STRONG REDUCING AGENTS

AMMONIA

STRONG BASES

ALCOHOLS

MAGNESIUM

MAY DECOMPOSE ON EXPOSURE TO LIGHT.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

NITROGEN OXIDES

SILVER/SILVER OXIDES

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

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

ACUTE EFFECTS

HARMFUL IF SWALLOWED.

MAY BE HARMFUL IF INHALED.

MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.

MAY CAUSE ARGYRIA (A SLATE-GRAY OR BLUISH DISCOLORATION OF THE SKIN AND DEEP TISSUES DUE TO THE DEPOSIT OF INSOLUBLE ALBUMINATE OF SILVER).

ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATION CAUSES CYANOSIS. ONSET MAY BE DELAYED 2 TO 4 HOURS OR LONGER.

INGESTION CAN CAUSE SEVERE GASTROENTERITIS THAT MAY BE FATAL.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: VW4725000

SILVER(I) NITRATE (1:1)

IRRITATION DATA

EYE-RBT 1 MG SEV

AROPAW 25,839,1941

EYE-RBT 10 MG MOD

TXAPA9 55,501,1980

TOXICITY DATA

UNR-MAN LDLO:29 MG/KG

85DCAI 2,73,1970

ORL-RAT LD50:1173 MG/KG

GTPZAB 27(12),33,1983

IPR-RAT LD50:83 MG/KG

GTPZAB 27(12),33,1983

ORL-MUS LD50:50 MG/KG

JPPMAB 2,20,1950

IPR-MUS LD50:17 MG/KG

GTPZAB 27(12),33,1983

ORL-GPG LD50:473 MG/KG

GTPZAB 27(12),33,1983

TARGET ORGAN DATA

BEHAVIORAL (SOMNOLENCE)

BEHAVIORAL (TETANY)

LUNGS, THORAX OR RESPIRATION (DYSPPNAE)

EFFECTS ON FERTILITY (MALE FERTILITY INDEX)

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.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----
UN#: 1493
PROPER SHIPPING NAME: SILVER NITRATE
PG: II
CLASS: 5.1

SECTION 15. ----- REGULATORY INFORMATION -----
EUROPEAN INFORMATION
EC INDEX NO: 047-001-00-2
OXIDIZING
R: 34
CAUSES BURNS.
R: 26/27/28
VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R: 8
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
S: 36/37/39
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
S: 17
KEEP AWAY FROM COMBUSTIBLE MATERIAL

REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
ACGIH TLV-TWA 0.01 MG(AG)/M3 DTLVS* TLV/BEI,1996
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION
FEREAC 54,7740,1989
MSHA STANDARD-AIR:TWA 0.01 MG(AG)/M3
DTLVS* 3,231,1971

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NOHS 1974: HZD 80142; NIS 76; TNF 3772; NOS 40; TNE 27982
NOES 1983: HZD 80142; NIS 95; TNF 7884; NOS 69; TNE 176015; TFE 99042
EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-SA7/SHE
EPA GENETOX PROGRAM 1988, NEGATIVE: E COLI POLA WITHOUT S9
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

U.S. INFORMATION
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS - SILVER 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. AMRESKO INC. 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.