



chemists helping chemists in research & industry

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DATE: 05/06/94  
CUST#: 523216  
PO#: UND-435595

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

SECTION 1. - - - - - CHEMICAL IDENTIFICATION - - - - -  
PRODUCT #: 20836-1 NAME: SILVER TETRAFLUOROBORATE, 98%

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -  
CAS #: 14104-20-2  
MF: AGBF4  
SYNONYMS  
SILVER BOROFLUORIDE \* SILVER FLUOROBORATE \* SILVER TETRAFLUOROBORATE \*

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -  
LABEL PRECAUTIONARY STATEMENTS  
CORROSIVE  
CAUSES BURNS.  
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.  
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.  
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  
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.  
SPECIAL FIREFIGHTING PROCEDURES

CONTINUED ON NEXT PAGE

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M A T E R I A L   S A F E T Y   D A T A   S H E E T                      P A G E   2

PRODUCT #: 208361  
MF: AGBF4

NAME: SILVER TETRAFLUOROBORATE, 98%

CUST#: 523216  
PO#: UND-435595

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 - - - - -

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  
VIOLENT SPONTANEOUS EXPLOSIONS HAVE OCCURRED IN THE PREPARATION OF THE SALT FROM SILVER OXIDE AND BORON TRIFLUORIDE ETHERATE IN NITROMETHANE.

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

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
SAFETY SHOWER AND EYE BATH.  
USE ONLY IN A CHEMICAL FUME HOOD.  
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.  
CORROSIVE.  
HARMFUL SOLID.  
KEEP TIGHTLY CLOSED.  
MOISTURE SENSITIVE  
HANDLE AND STORE UNDER NITROGEN.

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PAGE 3

PRODUCT #: 209361  
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STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODDOR  
WHITE TO LIGHT TAN POWDER

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

INCOMPATIBILITIES  
LIGHT SENSITIVE  
MAY DECOMPOSE ON EXPOSURE TO MOIST AIR OR WATER.  
STRONG ACIDS  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
HYDROGEN FLUORIDE

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

ACUTE EFFECTS  
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.  
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES  
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.  
INHALATION MAY BE FATAL AS A RESULT OF 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).  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND  
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS NO: ED2875000  
BORATE(1-), TETRAFLUORO-, SILVER (1+)

TOXICITY DATA  
IVN-MUS LD50: 56 MG/KG  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
CSLNX\* NX#06756

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MF: AGBF4

COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION -----  
DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----  
CATALYSTS AND EXPENSIVE METALS 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 -----

REVIEWS, STANDARDS, AND REGULATIONS

- ACGIH TLV-TWA 0.01 MG(AG)/M3      85 IN A8 5,529,86
- MSHA STANDARD-AIR: TWA 0.01 MG(AG)/M3
- DTLVS\* 3,231,71
- OSHA PEL: 8H TWA 2.5 MG(F)/M3
- FEREAC 54,2923,89
- OSHA PEL FINAL: 8H TWA 2.5 MG(F)/M3
- FEREAC 54,2923,89
- DEL-ARAB REPUBLIC OF EGYPT: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-AUSTRALIA: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-BELGIUM: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-DENMARK: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-FINLAND: TWA 0.01 MG(AG)/M3; STEL 0.03 MG(AG)/M3; SKIN      JANUARY 1993
- DEL-THE NETHERLANDS: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-THE PHILIPPINES: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-SWITZERLAND: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL-UNITED KINGDOM: TWA 0.01 MG(AG)/M3      JANUARY 1993
- DEL IN BULGARIA, COLOMBIA, JORDAN, KOREA, NEW ZEALAND, SINGAPORE,  
VIETNAM CHECK ACGIH TLV
- NIOSH REL TO FLUORIDES, INORGANIC-AIR: 10H TWA 2.5 MG(F)/M3
- NIOSH\* DHHS #92-100,92

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PAGE 5

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NOES 1983: HZD X7186; NIS 1; TNF 7; NDS 1; TNE 1445; TFE 230  
EPA TSCA CHEMICAL INVENTORY, JUNE 1993  
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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

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