

## MATERIAL SAFETY DATA SHEET

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Version 1.4

## Section 1 - Product and Company Information

Product Name ANTIMONY(III) OXIDE, POWDER, <5  
MICRON, 99%

Product Number 230898

Brand ALDRICH

Company Sigma-Aldrich

Street Address 3050 Spruce Street

City, State, Zip, Country SAINT LOUIS MO 63103 US

Technical Phone: 314 771 5765

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## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ANTIMONY (III) OXIDE	1309-64-4	Yes

Formula Sb2O3

Synonyms A 1582 \* A 1588LP \* Amspec-KR \* Antimonious oxide \* Antimony(3+) oxide \* Antimony sesquioxide \* Antimony trioxide \* Antimony trioxide production (ACGIH) \* Antimony White \* Antox \* AP 50 \* AT 3 (fireproofing agent) \* Atox F \* Atox S \* Chemetron fire shield \* C.I. 77052 \* C.I. Pigment White 11 \* Dechlorane A-O \* Diantimony trioxide \* Exitelite \* Fireshield FSPO 405 \* Flowers of antimony \* NCI-C55152 \* Nyacol A 1530 \* Nyacol A 1510LP \* Patox C \* Patox H \* Patox L \* Patox M \* Patox S \* Stibiox MS \* Thermoguard B \* Thermoguard L \* Thermoguard S \* Timonox \* Timonox White Star \* Twinkling star \* Weisspiessglanz (German) \* White star

RTECS Number: CC5650000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Limited evidence of a carcinogenic effect.

Possible Carcinogen (US). Calif. Prop. 65 carcinogen.

## HMIS RATING

HEALTH: 0\*

FLAMMABILITY: 0

REACTIVITY: 0

## NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

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#### Section 4 - First Aid Measures

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##### ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

##### INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

##### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

##### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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#### Section 5 - Fire Fighting Measures

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##### FLASH POINT

N/A

##### AUTOIGNITION TEMP

N/A

##### FLAMMABILITY

N/A

##### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

##### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

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#### Section 6 - Accidental Release Measures

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##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

##### METHODS FOR CLEANING UP

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.

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#### Section 7 - Handling and Storage

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##### HANDLING

User Exposure: Do not breathe dust. Do not get in eyes, on skin,

on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed. Store in a cool dry place.

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#### Section 8 - Exposure Controls / PPE

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##### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

##### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator in nonventilated areas and/or for exposure above the TLV or PEL.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

##### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

##### EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	0.5 MG(SB)/M3
Remarks: Sb203 handling/use			
USA	OSHA.	PEL	8H TWA 0.5 MG(SB)/M3
New Zealand OEL			
Remarks: check ACGIH TLV			
USA	NIOSH	TWA	0.5 MG(SB)/M3

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#### Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	291.5 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	655 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	5.2 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	

Solubility

N/A

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nature of decomposition products not known.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

### TOXICITY DATA

Oral

Rat

> 34600 mg/kg

LD50

Remarks: Behavioral: Somnolence (general depressed activity).

Skin and Appendages: Other: Hair.

Intraperitoneal

Rat

3250 MG/KG

LD50

Subcutaneous

Rat

7904 MG/KG

LD50

Intraperitoneal

Mouse

172 MG/KG

LD50

### IRRITATION DATA

Eyes

Rabbit

100 mg

Remarks: Mild irritation effect

### CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Species: Rat  
Route of Application: Inhalation  
Dose: 4200 UG/M3  
Exposure Time: 52W-  
Frequency: I  
Result: Tumorigenic: Carcinogenic by RTECS criteria. Lungs,  
Thorax, or Respiration: Tumors. Liver: Tumors.

Species: Rat  
Route of Application: Inhalation  
Dose: 4 MG/M3  
Exposure Time: 1Y-  
Frequency: I  
Result: Tumorigenic: Equivocal tumorigenic agent by RTECS  
criteria. Lungs, Thorax, or Respiration: Tumors. Liver: Tumors.

Species: Rat  
Route of Application: Inhalation  
Dose: 1600 UG/M3  
Exposure Time: 52W-  
Frequency: I  
Result: Tumorigenic: Neoplastic by RTECS criteria. Liver: Tumors.  
Skin and Appendages: Other: Tumors.

Species: Rat  
Route of Application: Inhalation  
Dose: 50 MG/M3  
Exposure Time: 7H/52W-  
Frequency: I  
Result: Tumorigenic: Carcinogenic by RTECS criteria. Lungs,  
Thorax, or Respiration: Tumors.

#### IARC CARCINOGEN LIST

Rating: Group 2B

#### ACGIH CARCINOGEN LIST

Rating: A2

#### CHRONIC EXPOSURE - MUTAGEN

Species: Human  
Dose: 50 MG/L  
Cell Type: lymphocyte  
Mutation test: Cytogenetic analysis

Species: Hamster  
Dose: 90 UG/L  
Cell Type: lung  
Mutation test: Sister chromatid exchange

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 270 UG/M3  
Route of Application: Inhalation  
Exposure Time: (1-21D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g.,  
dead and/or resorbed implants per total number of implants).  
Effects on Embryo or Fetus: Fetal death.

Species: Rat  
Dose: 82 UG/M3  
Route of Application: Inhalation  
Exposure Time: (1-21D PREG)  
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat  
Dose: 270 UG/M3/24H  
Route of Application: Inhalation  
Exposure Time: (1-21D PREG)  
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death.

Species: Rat  
Dose: 23320 UG/KG  
Route of Application: Intratesticular  
Exposure Time: (1D MALE)  
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

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## Section 12 - Ecological Information

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No data available.

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## Section 13 - Disposal Considerations

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### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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## Section 15 - Regulatory Information

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### EU DIRECTIVES CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 40  
Risk Statements: Limited evidence of a carcinogenic effect.  
S: 22 36/37  
Safety Statements: Do not breathe dust. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.

Risk Statements: Limited evidence of a carcinogenic effect.

Safety Statements: Do not breathe dust. Wear suitable protective clothing and gloves.

US Statements: Possible Carcinogen (US). Calif. Prop. 65 carcinogen.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

DEMINIMIS: 1 %

NOTES: This product is subject to SARA section 313 reporting requirements - antimony compounds.

TSCA INVENTORY ITEM: Yes

UNITED STATES - STATE REGULATORY INFORMATION

CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s) known to the state of California to cause cancer.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich 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. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.