

# Material Safety Data Sheet

## Antimony Pentoxide

ACC# 01780

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Antimony Pentoxide

**Catalog Numbers:**

**Synonyms:** Antimony peroxide

**Company Identification:** Min-Metals Antimony Products Co.,Ltd.

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### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1314-60-9	Antimony Pentoxide	48% -50%	215-175-0

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: yellow or white liquid.

**Warning!** Possible cancer hazard. May cause cancer based on animal data. Risk of cancer depends on duration and level of exposure. Causes eye irritation. May cause skin and respiratory tract irritation. May cause lung damage.

**Target Organs:** Lungs, eyes, skin.

#### Potential Health Effects

**Eye:** Contact produces irritation, tearing, and burning pain. May cause chemical conjunctivitis.

**Skin:** May cause skin irritation. Repeated or prolonged skin contact may cause antimony measles characterized by itchy papules and pustules around the sweat and fat glands.

**Ingestion:** May cause irritation of the digestive tract. May cause slow pulse, low blood pressure, bloody stool, shallow breathing, coma, convulsions, and possible death.

**Inhalation:** May cause respiratory tract irritation. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. May cause lung damage. Antimony compounds may enter the body through the lungs. Inhalation may produce severe bronchitis with spasms, coughing, and chest pain.

**Chronic:** Possible cancer hazard based on tests with laboratory animals. Prolonged inhalation may cause respiratory tract inflammation and lung damage. Prolonged or repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. May cause chronic heart disease due to effects on the heart muscle. This substance has caused adverse reproductive and fetal effects in laboratory animals. Prolonged or excessive inhalation or ingestion exposures to Antimony or Antimony trioxide

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may result in inflammation of the lungs, airway obstruction, bronchospasm, chronic bronchitis, liver effects, blood effects, and neurological effects.

## Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Powder ignites and burns when heated. Containers may explode when heated.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 1; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Antimony Pentoxide	0.5 mg/m <sup>3</sup> TWA (listed under Antimony).	0.5 mg/m <sup>3</sup> TWA (listed under Antimony).50 mg/m <sup>3</sup> IDLH (listed under Antimony).	0.5 mg/m <sup>3</sup> TWA (listed under Antimony).

**OSHA Vacated PELs:** Antimony Pentoxide: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Yellow

**Odor:** odorless

**pH:** Amphoteric.

**Vapor Pressure:** 1 mm Hg @ 574 C

**Vapor Density:** Not available.

**Evaporation Rate:**Not available.

**Viscosity:** Not available.

**Boiling Point:** 1456 deg C @ 760 mmHg

**Freezing/Melting Point:**1213 deg F

**Decomposition Temperature:**Not available.

**Solubility:** Slightly soluble in water.

**Specific Gravity/Density:** 5.2

**Molecular Formula:**Sb<sub>2</sub>O<sub>5</sub>

**Molecular Weight:**323.5

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Dust generation, excess heat, moisture, high humidity.

**Incompatibilities with Other Materials:** Oxidizing agents, reducing agents, strong acids, bases, bromine trifluoride, halogenated agents, chlorinated rubber, halogenated acids.

**Hazardous Decomposition Products:** Antimony/antimony oxides.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 1314-60-9

**LD50/LC50:**

CAS# 1314-60-9

Draize test, rabbit, eye: 100 mg Mild;

Oral, rat: LD50 = >34600 mg/kg;

**Carcinogenicity:**

CAS# 1309-64-4:

- **ACGIH:** A2 - Suspected Human Carcinogen (production)
- **California:** carcinogen, initial date 10/1/90
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen

**Epidemiology:** Antimony Pentoxide production is suspected of inducing human cancers on the basis of limited epidemiologic studies and has not assigned TLV.

**Teratogenicity:** No information found

**Reproductive Effects:** Adverse reproductive effects have occurred in experimental animals.

**Mutagenicity:** Mutagenic effects have occurred in humans. Mutagenic effects have occurred in experimental animals.

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Fathead Minnow: 833mg/l; 96H; Not specified Fish: Bluegill/Sunfish: 530mg/l; 96H; Not specified. 96 Hour LD50 bluegill sunfish: >530 mg/L. 96 Hour LD50 fathead minnow: >833 mg/L.

**Environmental:** Antimony is expected to exist as the trioxide in the atmosphere, since most of the atmospheric releases of antimony substances result from high temperature industrial processes, from the combustion of petroleum, petroleum products and coal, and from the incineration of products that contain antimony. Slight biodegradation but will bioconcentrate.

**Physical:** No information available.

**Other:** No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	<b>US DOT</b>	<b>Canada TDG</b>
<b>Shipping Name:</b>	Not regulated as a hazardous material	Not regulated.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### **US FEDERAL**

#### **TSCA**

CAS# 1314-60-9 is listed on the TSCA inventory.

#### **Health & Safety Reporting List**

CAS# 1314-60-9: Effective 10/4/82, Sunset 10/4/92

#### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

#### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

#### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

#### **CERCLA Hazardous Substances and corresponding RQs**

CAS# 1314-60-9: 1000 lb final RQ; 454 kg final RQ

#### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

#### **SARA Codes**

CAS # 1314-60-9: immediate, delayed.

#### **Section 313**

This material contains Antimony trioxide (listed as Antimony), 99-100%, (CAS# 1314-60-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### **Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### **Clean Water Act:**

CAS# 1314-60-9 is listed as a Hazardous Substance under the CWA. CAS# 1314-60-9 is listed as a Priority Pollutant under the Clean Water Act. CAS# 1314-60-9 is listed as a Toxic Pollutant under the Clean Water Act.

#### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

#### **STATE**

CAS# 1314-60-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

#### **California Prop 65**

**The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:**

WARNING: This product contains Antimony pentoxide, a chemical known to the state of

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California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

## **European/International Regulations**

### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbols:**

XN

#### **Risk Phrases:**

R 40 Limited evidence of a carcinogenic effect.

#### **Safety Phrases:**

S 22 Do not breathe dust.

S 36/37 Wear suitable protective clothing and gloves.

### **WGK (Water Danger/Protection)**

CAS# 1314-60-9: 2

#### **Canada - DSL/NDSL**

CAS# 1314-60-9 is listed on Canada's DSL List.

#### **Canada - WHMIS**

This product has a WHMIS classification of D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

#### **Canadian Ingredient Disclosure List**

CAS# 1314-60-9 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 21/6/1999

**Revision #8 Date:** 23/3/2011

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