

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Antimony Trioxide
CAS number	1309-64-4
Synonyms	No additional information

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
-----------------	----------------------

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Suspected of causing cancer.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use personal protective equipment as required.

Response:

IF exposed or concerned: Get medical attention/advice.

Storage:

Store locked up.

Disposal:

Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

WARNING. Cancer and Reproductive Harm - <https://www.p65warnings.ca.gov/>.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Antimony trioxide	-	1309-64-4	>95%
Lead monoxide	-	1317-36-8	<0.1%
Arsenic trioxide	-	1327-53-3	<0.1%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this sheet to a doctor if medical advice is needed.

If inhaled

Move to fresh air. Obtain medical attention. If not breathing, give artificial respiration.

In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

If swallowed

Do not induce vomiting. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point No information available.

Autoignition Temperature Not applicable.

Explosion limits

Upper No information available.

Lower No information available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

6.4 Reference to other sections

See section 8 for personal protective equipment. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Use only under a chemical fume hood.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatibilities

Strong acids, Strong bases, Reducing agents, Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Antimony trioxide	(Vacated) TWA	0.5 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Antimony trioxide	TWA	0.5 mg/m ³
Lead monoxide	TWA	0.05 mg/m ³
Arsenic trioxide	TWA	0.01 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Antimony trioxide	IDLH:	50 mg/m ³
	TWA:	0.5 mg/m ³
Lead monoxide	IDLH:	100 mg/m ³
	TWA:	0.050 mg/m ³
Arsenic trioxide	IDLH:	5 mg/m ³
	Ceiling:	0.002 mg/m ³

Biological occupational exposure limits

No additional information.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use only under a chemical fumehood.

Personal protective equipment

Eye/face protection

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 protection

Wear appropriate protective gloves to prevent skin exposure.

Body Protection

Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection

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.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Powder solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	656 °C / 1212.8 °F
Boiling Point/Range	1550 °C / 2822 °F @ 760 mmHg
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No information available
Lower	No information available
Vapor Pressure	1.3 hPa @ 574 °C
Vapor Density	No information available
Density	No information available
Solubility	Slightly soluble in water

Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	O3Sb2
Molecular Weight	291.42
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat.

10.5 Incompatible materials

Strong acids, Strong bases, Reducing agents, Strong oxidizing agents.

10.6 Hazardous decomposition products

Antimony oxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Antimony trioxide	> 34600 mg/kg (Rat)	-	-
Lead monoxide	> 10000 mg/kg (Rat)	-	-
Arsenic trioxide	20 mg/kg (Rat)	-	-

Skin corrosion/irritation

May cause skin and respiratory tract irritation.

Serious eye damage/eye irritation

May cause eye irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Antimony trioxide	1309-64-4	Group 2B	Not listed	A2	X	A2
Lead monoxide	1317-36-8	Group 2A	Reasonably Anticipated	A3	X	Not listed
Arsenic trioxide	1327-53-3	Group 1	Known	A1	X	A1

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Contains a substance which is Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
-----------	------------------	-----------------	----------	------------

Antimony trioxide	EC50: 0.65 - 0.81 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: 0.63 - 0.8 mg/L, 72h (Pseudokirchneriella subcapitata)	LC50 >1000 mg/L/96h (Brachydanio rerio)	EC50 > 3.5 mg/L 7 h	EC50: > 1000 mg/L, 48h (Daphnia magna) EC50: 361.5 - 496.0 mg/L, 48h Static (Daphnia magna)
Lead monoxide	Not listed	Pimephales promelas: LC50=0.3 mg/L 96h	Not listed	EC50=0.13 mg/L 48h
Arsenic trioxide	Not listed	LC50: > 1000 mg/L, 96h static (Oncorhynchus mykiss) LC50: 18.8 - 21.4 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 135 mg/L, 96h (Pimephales promelas)	EC50 = 31.43 mg/L 60 min EC50 = 33.39 mg/L 30 min EC50 = 43.56 mg/L 15 min EC50 = 73.73 mg/L 5 min	EC50 = 0.038 mg/L 24h EC50 = 0.96 mg/L 96h EC50 = 0.038 mg/L 24h

12.2 Persistence and degradability

based on information available. May persist Insoluble in water.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility. Is not likely mobile in the environment due its low water solubility.

12.5 Results of PBT and vPvB assessment

Arsenic trioxide Log Pow = 18.1

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number UN3077

Proper Shipping name Environmentally hazardous substance, solid, n.o.s.

Hazard Class	9
Packaging Group	III
Technical name	Antimony Trioxide

IMDG

UN Number	Not regulated
Proper Shipping name	Not regulated
Hazard Class	Not regulated
Packaging Group	Not regulated
Technical name	Antimony Trioxide

IATA

UN Number	Not regulated
Proper Shipping name	Not regulated
Hazard Class	Not regulated
Packaging Group	Not regulated
Technical name	Antimony Trioxide

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Antimony trioxide = 1000 lb RQ.
Arsenic trioxide = 1 lb RQ.

SARA 304 Emergency release notification
Arsenic trioxide 1327-53-3 = 1 lb RQ

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Arsenic trioxide 1327-53-3 = 100/10,000 TPQ

SARA 311/312 Hazardous
See section 2 for more information.

SARA 313 (TRI reporting)
Antimony trioxide 1309-64-4 = 1.0%
Lead monoxide 1317-36-8 = 0.1%
Arsenic trioxide 1327-53-3 = 0.1%

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Antimony trioxide 1309-64-4 = Listed

Lead monoxide 1317-36-8 = Listed

Arsenic trioxide 1327-53-3 = Listed

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed.

Safe Drinking Water Act

Antimony trioxide 1309-64-4 = Toxic Pollutants, 1000 lb RQ

Lead monoxide 1317-36-8 = Toxic Pollutants

Arsenic trioxide 1327-53-3 = Toxic Pollutants, 1 lb RQ

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Antimony trioxide 1309-64-4 = Listed

Lead monoxide 1317-36-8 = Listed

Arsenic trioxide 1327-53-3 = Listed

US. New Jersey Worker and Community Right-to-Know Act

Antimony trioxide 1309-64-4 = Listed

Lead monoxide 1317-36-8 = Listed

Arsenic trioxide 1327-53-3 = Listed

US. Pennsylvania Worker and Community Right-to-Know Law

Antimony trioxide 1309-64-4 = Listed

Lead monoxide 1317-36-8 = Listed

Arsenic trioxide 1327-53-3 = Listed

California Proposition 65

Antimony trioxide 1309-64-4 = Carcinogen

Lead monoxide 1317-36-8 = Carcinogen

Arsenic trioxide 1327-53-3 = Carcinogen, Developmental

SECTION 16: Other information

Date of Issue: 6/6/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.