SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Antimony(III) sulfide
CAS number	1345-04-6
Synonyms	Antimony trisulfide

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
Specific target organ toxicity - (repeated exposure)	Category 2
Combustible dust	Yes

2.2 GHS Label elements, including precautionary statements

Pictogram 

Signal Word Warning

Hazard statements May form combustible dust concentrations in air. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

Prevention Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Response IF exposed or concerned: Get medical attention/advice.

Storage Store locked up. Store in a well-ventilated place. Keep container tightly closed.

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

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

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Antimony sulfide	Antimony trisulfide	1345-04-6	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

In case of skin contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

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 Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed
None reasonable foreseeable.

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 Water spray. Carbon dioxide. Dry chemical. Chemical foam.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture
Dust can form an explosive mixture with air. Fine dust dispersed in air may ignite. Hazardous combustion products: Sulfur oxides, sulfides, antimony, antimony oxide.

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.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.
Lower No data 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 as required. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional. Ecological Information. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials.

Incompatibilities

Acids, 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 sulfide	(Vacated) TWA	0.5 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Antimony sulfide	TWA	0.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value

Antimony sulfide	IDLH	50 mg/m3
	TWA	0.5 mg/m3

Biological occupational exposure limits
No information available.

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.

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 and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Use a NIOSH/MSHA or European Standard EN149 approved respiratory if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure
No information available.

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 data available
Lower	No data 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 data 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. Incomptaible products. Excess heat.

10.5 Incompatible materials
Strong acids, strong bases, reducing agent, 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)	>2000 mg/kg (rabbit)	>5.2 mg/L (rat) 4h
Lead monoxide	>10000 mg/kg (rat)	>2000 mg/kg (rat)	>5.05 mg/L (rat) 4h
Arsenic trioxide	20 mg/kg (rat)	-	-

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/eye irritation
May cause eye irritation.

Respiratory or skin sensitization
May cause respiratory tract irritation.

Germ cell mutagenicity
No information available.

Carcinogenicity

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

Specific target organ toxicity - single exposure
None known

Specific target organ toxicity - repeated exposure
None known

Reproductive toxicity
No information available.

Chronic effects
No information available.

11.2 Additional Information
No information available.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Antimony trioxide	EC50	Pseudokirshneriella subcapitata	0.65 - 0.81 mg/L 96h
	EC51	Pseudokirshneriella subcapitata	0.63 - 0.8 mg/L 72 h
	LC50	Brachydanio rerio	>1000 mg/L 96 h
	EC50	Microtox	>3.5 mg/L 7 h
	EC51	Daphnia magna	361.5 - 496.0 mg/L 48 h
	EC52	Daphnia magna	>1000 mg/L 48 h
Lead monoxide	LC50	Pimephales promelas	0.3 mg/L 96h
	EC50	Water Flea	0.13 mg/L 48 h
	LC50	Pimephales promelas	135 mg/L 96 h

Arsenic trioxide	LC51	Oncorhynchus mykiss	>1000 mg/L 96 h
	LC52	Oncorhynchus mykiss	18.8 - 21.4 mg/L 96 h
	EC50	Microtox	31.43 mg/L 60 min
	EC51	Microtox	33.39 mg/L 30 min
	EC52	Microtox	43.56 mg/L 15 min
	EC53	Microtox	73.73 mg/L 5 min
	EC54	Water Flea	0.038 mg/L 24 h
	EC55	Water Flea	0.96 mg/L 96 h
	EC56	Water Flea	0.038 ng/L 24 h

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. Low Pow: 18.1

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
The toxicogical properties have not been fully investigated.

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)
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed (ANTIMONY TRIOXIDE) 1000 lb, 454 kg
Listed (ARSENIC TRIOXIDE) 1 lb, 0.454 kg

SARA 304 Emergency release notification

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Listed (LEAD MONOXIDE) 30 µg/m3 Action Level, 50 µg/m3 TWA
Listed (ARSENIC TRIOXIDE) 10 µg/m3 TWA, 5 µg/m3 Action Level

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

SARA 313 (TRI reporting)

Listed.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting threasholds
Antimony trioxide	1309-64-4	>95	1.0 %	-
Lead monoxide	1317-36-8	<0.1	> 0 %	RT = 100 lb
Arsenic trioxide	1327-53-3	<0.1	0.1 %	-

Other federal regulations

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

Listed, (ANTIMONY TRIOXIDE)
Listed, (LEAD MONOXIDE)
Listed, (ARSENIC TRIOXIDE)

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

Not listed.

Safe Drinking Water Act

Listed, (ANTIMONY TRIOXIDE) Hazardous Substances, Reportable Quantities: 1000 lb, Toxic Pollutants.
Listed, (LEAD MONOXIDE) Toxic Pollutants.
Listed, (ARSENIC TRIOXIDE) Hazardous Substances, Reportable Quantities: 1 lb, Toxic Pollutants.

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

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Listed (ANTIMONY TRIOXIDE)
Listed (LEAD MONOXIDE)
Listed (ARSENIC TRIOXIDE)

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

Listed (ANTIMONY TRIOXIDE)
Listed (LEAD MONOXIDE)
Listed (ARSENIC TRIOXIDE)

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

Listed (ANTIMONY TRIOXIDE)
Listed (LEAD MONOXIDE)
Listed (ARSENIC TRIOXIDE)

California Proposition 65

Listed (ANTIMONY TRIOXIDE) Carcinogen
Listed (LEAD MONOXIDE) Carcinogen
Listed (ARSENIC TRIOXIDE) Carcinogen: 0.06 µg/day, Developmental: 10 µg/day

SECTION 16: Other information

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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.