Antimony Trioxide

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 01/25/2017 Version: 1.2

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Antimony Trioxide
Formula	:	Sb_2O_3
Other means of identification	:	Antimony (3+) Oxide

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

Use of the substance/mixture	:	Flame retardant synergist Catalyst Clarifying agent opacifier Pigment

1.3. Details of the supplier of the safety data sheet

Amspec
101 Carson Dr.
Bear, 19701 - USA
Tel: 302-392-1702
Fax 302-392-1706
www.amspec.net

1.4. Emergency telephone number

Emergency number	:	Chemtrec (800) 424-9300 Chemtrec (Outside USA) +1 703-527-3887 (24 hours) Customer number: 1358

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Carc. 2 H351

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS08

Signal word (GHS-US)	:	Warning
Hazard statements (GHS-US)	:	H351 - Suspected of causing cancer (Inhalation)
Precautionary statements (GHS-US)	:	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective clothing, protective gloves, eye protection P308+P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P501 - Dispose of contents/container to Comply with applicable local, national and international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	GHS-US classification
Antimony oxide (Sb_2O_3)	(CAS No) 1309-64-4	100	Carc. 2, H351

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. In case of breathing difficulties administer oxygen. by trained personnel. In all cases of doubt, or when symptoms persist, seek medical advice.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if irritation develops.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Do NOT induce vomiting. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Effects of excessive exposures may cause. Prolonged or repeated skin contact causes skin irritation and red, pimply skin eruptions or lesions referred to as “antimony measles”. Irritation is aggravated when skin surface is moist as when perspiring. Route(s) of entry: inhalation, eye and ingestion of dust or fume. Skin.

Symptoms/injuries after inhalation : Prolonged and frequent exposure through inhalation may cause cancer. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/injuries after skin contact : Prolonged or repeated skin contact causes skin irritation and red, pimply skin eruptions or lesions referred to as “antimony measles”. Irritation is aggravated when skin surface is moist as when perspiring.

Symptoms/injuries after eye contact : Dust from this product may cause eyes irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. Complete protective clothing.

Other information : When heated, material emits irritating fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid raising powdered materials into airborne dust. Avoid breathing dust, mist or spray. On burning: release of harmful/irritant gases/vapours e.g.: (antimony oxides).

6.1.1. For non-emergency personnel

Protective equipment : Wear protective gloves and protective clothing. Even though no eye contact is expected under reasonable normal conditions of use, appropriate eye protection should be worn when handling this material. Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material. Wear an approved high-efficiency dust/fume respirator.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection. Wear an approved high-efficiency dust/fume respirator. Wear suitable protective clothing. Use suitable eye protection and gloves.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Incase of large spills inform responsible authorities. Dispose of spilled material in accordance with the relevant regulations.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. Avoid raising powdered materials into airborne dust. Sweep up or vacuum up the product. Use approved industrial vacuum cleaner for removal. Clean affected area with warm soapy water. Store away from other materials. Collect all waste in suitable and labelled containers and dispose according to local legislation.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep out of reach of children. Ensure adequate ventilation. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. As a precautionary measure, wearing chemical resistant gloves, long sleeved overalls and closed footwear, designed to minimize skin contact is suggested for all (di)antimony trioxide powder handling workplaces. Avoid breathing dust, mist or spray. Avoid creating or spreading dust. Work in a well-ventilated area. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Take care for general good hygiene and housekeeping.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.
Storage conditions	:	Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Keep locked up and out of reach of children.
Incompatible materials	:	Strong acids, bases. reducing agents.
Special rules on packaging	:	Correctly labelled. Do not store in unlabeled containers.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls	:	Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Personal protective equipment	:	Avoid all unnecessary exposure. Gloves. Dust formation: dust mask. Protective goggles. Protective clothing. The following pictograms represent the minimum requirements for personal protective equipment.

Hand protection	:	Wear protective gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Eye protection	:	Chemical goggles or safety glasses. with side-shields.
Skin and body protection	:	Long sleeved protective clothing. Boots.
Respiratory protection	:	In case of inadequate ventilation wear respiratory protection. Wear dust mask in case of dust formation.

Environmental exposure controls	:	Avoid release to the environment. Prevent entry to sewers and public waters.
Consumer exposure controls	:	Contact lenses should not be worn. Do not eat, drink or smoke in areas where product is used. Separate working clothes from town clothes. Launder separately. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	White crystalline powder.
Colour	:	White.
Odour	:	Odourless.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	656 °C (1212 °F)
Freezing point	:	No data available
Boiling point	:	1550 °C (2822 °F)
Flash point	:	Not applicable
Self ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	5,2 - 5,7 g/cm³
Solubility	:	Water: 3,3 mg/l
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Explosive properties	:	Not applicable.
Oxidising properties	:	Not applicable.
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from incompatible materials.

10.5. Incompatible materials

Strong acids. Strong bases. Reducing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Antimony oxide (Sb_2O_3) (1309-64-4)	
LD50 oral rat	> 34600 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Suspected of causing cancer (Inhalation).

Antimony oxide (Sb_2O_3) (1309-64-4)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Prolonged and frequent exposure through inhalation may cause cancer. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/injuries after skin contact : Prolonged or repeated skin contact causes skin irritation and red, pimply skin eruptions or lesions referred to as “antimony measles”. Irritation is aggravated when skin surface is moist as when perspiring.

Symptoms/injuries after eye contact : Dust from this product may cause eyes irritation.

SECTION 12: Ecological information

12.1. Toxicity

Antimony oxide (Sb_2O_3) (1309-64-4)	
LC50 fishes 1	> 80 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	0,63 - 0,8 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC50 fish 2	> 1000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 2	361,5 - 496,0 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 other aquatic organisms 2	0,65 - 0,81 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

Antimony Trioxide (1309-64-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Antimony Trioxide (1309-64-4)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers. Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s. (Antimony trioxide), 9, III

UN-No.(DOT) : 3077

DOT NA no. : UN3077

DOT Proper Shipping Name : Environmentally hazardous substances, solid, n.o.s.
(Antimony trioxide)

Department of Transportation (DOT) Hazard Classes : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)

DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102)	:	8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description “Other regulated substances, liquid or solid, n.o.s.”, as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as “Environmentally hazardous substances, solid, n.o.s,” UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leakproof when used as bulk packaging. A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg: a. Metal: 11A, 11B, 11N, 21A, 21B and 21N b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2 c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2 d. Fiberboard: 11G e. Wooden: 11C, 11D and 11F (with inner liners) f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant liner). B54 - Open-top, sift-proof rail cars are also authorized. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	213
DOT Packaging Bulk (49 CFR 173.xxx)	:	240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

Additional information

Other information	:	For packages greater than or equal to 1,000 lbs: UN3077 Class 9 Packaging group: III For packages less than 1,000 lbs: NOT Regulated . Reportable Quantity (RQ): Antimony trioxide 1000 lb (454 kg).

ADR

Transport document description	:	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)
Packing group (ADR)	:	III
Class (ADR)	:	9 - Miscellaneous dangerous substances and articles
Hazard identification number (Kemler No.)	:	90
Classification code (ADR)	:	M7

Danger labels (ADR) : 9 - Miscellaneous dangerous substances and articles

Orange plates :

Tunnel restriction code : E
LQ : 5kg
Excepted quantities (ADR) : E1

Transport by sea

UN-No. (IMDG) : 3077
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG) : III - substances presenting low danger

Air transport

UN-No.(IATA) : 3077
Class (IATA) : 9 - Miscellaneous Dangerous Goods

SECTION 15: Regulatory information

15.1. US Federal regulations

Antimony Trioxide-2014 (1309-64-4)	
EPA TSCA Regulatory Flag	This product contains antimony and is subject to the U.S. EPA reporting requirements of Sections 311, 312, and 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40CFR372. The components of this product are listed in the U.S. EPA TSCA chemical substance inventory.
SARA Section 313 - Emission Reporting	This product contains antimony and is subject to the U.S. EPA reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40CFR372. The components of this product are listed in the U.S. EPA TSCA chemical substance inventory.

Antimony oxide (Sb2O3) (1309-64-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Antimony oxide (Sb_2O_3) (1309-64-4)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

EU-Regulations

Antimony oxide (Sb_2O_3) (1309-64-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Carc. 2 H351
Aquatic Acute 1 H400

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40

Full text of R-phrases: see section 16

15.2.2. National regulations

Antimony oxide (Sb_2O_3) (1309-64-4)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Poisonous and Deleterious Substances Control Law
Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

Antimony Trioxide (1309-64-4)	
U.S. - California - Proposition 65 - Carcinogens List	Yes

Antimony oxide (Sb_2O_3) (1309-64-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				

SECTION 16: Other information

Sources of Key data : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixturejs, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Abbreviations and acronyms : ATE - acute toxicity estimate. BCF - bioconcentration factor. CAS (Chemical Abstracts Service) number. CLP - Classification, Labelling and Packaging. CSR - Chemical Safety Report. EC - European Community. GHS - Globally Harmonised System. MSDS - Material Safety Data Sheet. PBT - Persistent, Bioaccumulative and Toxic substance. PEL- Permissible Exposure Level. STEL- Short-Term Exposure Limit . SDS - Safety Data Sheet . TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and Very Bioaccumulative. REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals.

Other information : None.

Full text of H-phrases: see section 16:

Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Carc. 2	Carcinogenicity, Category 2
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
R40	Limited evidence of a carcinogenic effect

SDS US (GHS HazCom 2012)

The information presented herein is believed to be correct but is not purported to be all inclusive and shall be used only as a guide. AMSPEC Chemical shall not be held liable for any damage resulting from handling or from contact with the above product.