

# Potassium antimonyl tartrate trihydrate

sc-236437

Material Safety Data Sheet



The Power is Question

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Potassium antimonyl tartrate trihydrate

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY:

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

"C4-H4-O7-Sb-K [as described in British Pharmacopoeia]", C2-H2-(OH)2-(COOK)-CO2-(SbO), "C8-H4-K2-O12-Sb2 [as described in US Pharmacopoeia]", "antimonyl potassium tartrate", "potassium acid antimony tartrate", "potassium antimonyl tartrate", "tartarised antimony", "tartarated antimony", "tartaric acid, antimony potassium salt", "tartar emetic", "Ajax Codes: 00000075 TECH", "00000074 UL", "00000073 AR", A74, "CAS RN: 11071-15-1 (anhydrous form)", "CAS RN: 28300-74-5 (trihydrate)"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Harmful by inhalation and if swallowed.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

■ Antimony poisoning causes similar symptoms to arsenic poisoning although vomiting is more prominent. There may be changes in the rhythm of the heart beat.

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■ Salts of tartaric acid (including Rochelle salt and Seidlitz powder) and the acid itself have all produced serious poisonings or fatalities in man. Gastrointestinal symptoms are marked and include violent vomiting, diarrhea, abdominal pain and thirst followed by cardiovascular collapse and/or kidney failure.

##### EYE

■ Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.

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##### SKIN

■ There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.

■ Skin contact with antimony compounds may result in redness and severe irritation with the formation of itchy papules, pustules, skin lesions/ small septic blisters (antimony spots) within a few hours.

Rhinitis may also result from dermal contact.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

■ The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

■ Inhalation of antimony can cause breathing difficulties and gastrointestinal upset including sore throat, shallow breathing, dizziness, weight loss, gum bleeds and anemia. Lung swelling and congestion can occur.

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■ Inhalation of vapors, aerosols (mists, fumes) or dusts, generated by the material during the course of normal handling, may be harmful.

#### CHRONIC HEALTH EFFECTS

■ There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

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Repeated or prolonged exposure to antimony and its compounds may produce inflammation of the mouth cavity, dry throat, metallic taste, gum infection, perforation of the nasal septum and throat, laryngitis, headache, difficulty breathing, indigestion, nausea, vomiting, diarrhea, loss of appetite, anemia, weight loss, tightness and pain in the chest, sleeplessness, muscular pain and weakness, dizziness, pharyngitis, bronchitis and pneumonia. Degenerative changes of the liver and kidney may occur.

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
antimony potassium tartrate	28300-74-5	> 98.5

## Section 4 - FIRST AID MEASURES

### SWALLOWED

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not

immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

#### **EYE**

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

#### **SKIN**

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

#### **INHALED**

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

#### **NOTES TO PHYSICIAN**

· Chelation with British Anti-Lewisite (BAL) for serious antimony exposures should be employed.  
· Dialyse as needed. The role of exchange diffusion is not clear.

### **Section 5 - FIRE FIGHTING MEASURES**

Vapour Pressure (mmHG):	Not applicable
Upper Explosive Limit (%):	Not Available
Specific Gravity (water=1):	2.6
Lower Explosive Limit (%):	Not Available

#### **EXTINGUISHING MEDIA**

· Water spray or fog.  
· Foam.

#### **FIRE FIGHTING**

· Alert Emergency Responders and tell them location and nature of hazard.  
· Wear full body protective clothing with breathing apparatus.  
When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

#### **GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**

· Combustible solid which burns but propagates flame with difficulty.  
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.  
Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), metal oxides, other pyrolysis products typical of burning organic material.  
May emit poisonous fumes.

#### **FIRE INCOMPATIBILITY**

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

#### **PERSONAL PROTECTION**

Glasses:  
Chemical goggles.  
Gloves:  
Respirator:  
Particulate

### **Section 6 - ACCIDENTAL RELEASE MEASURES**

#### **MINOR SPILLS**

· Remove all ignition sources.  
· Clean up all spills immediately.  
· Avoid contact with skin and eyes.  
· Control personal contact by using protective equipment.  
· Use dry clean up procedures and avoid generating dust.  
· Place in a suitable, labelled container for waste disposal.

#### **MAJOR SPILLS**

· Clear area of personnel and move upwind.  
· Alert Emergency Responders and tell them location and nature of hazard.

### **Section 7 - HANDLING AND STORAGE**

#### **PROCEDURE FOR HANDLING**

· Avoid all personal contact, including inhalation.  
· Wear protective clothing when risk of exposure occurs.  
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

### RECOMMENDED STORAGE METHODS

- Lined metal can, Lined metal pail/drum
- Plastic pail.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
Canada - British Columbia Occupational Exposure Limits	antimony potassium tartrate (Antimony and compounds, as Sb)		0.5						
US - Minnesota Permissible Exposure Limits (PELs)	antimony potassium tartrate (Antimony and compounds (as Sb))		0.5						
Canada - Alberta Occupational Exposure Limits	antimony potassium tartrate (Antimony & compounds, as Sb)		0.5						
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	antimony potassium tartrate (Antimony, metal and compounds (as Sb))		0.5						
US OSHA Permissible Exposure Levels (PELs) - Table Z1	antimony potassium tartrate (Antimony and compounds (as Sb))		0.5						
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))		0.5						
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))		0.5						
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))		0.5						

US - California Permissible Exposure Limits for Chemical Contaminants	antimony potassium tartrate (Antimony and compounds, as Sb)	0.5		
US - Idaho - Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5		
US - Hawaii Air Contaminant Limits	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5		
US - Alaska Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	antimony potassium tartrate (Antimony and compounds, (as Sb))	0.5	1.5	
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5	-	0.75
US - Washington Permissible exposure limits of air contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5	1.5	
Canada - Nova Scotia Occupational Exposure Limits	antimony potassium tartrate (Antimony - Compounds)	0.5		Measured as Sb. TLV Basis: skin & upper respiratory tract irritation
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds(as Sb))	0.5		
Canada - Northwest Territories Occupational Exposure Limits (English)	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5	1.5	
US - Michigan Exposure Limits for Air Contaminants	antimony potassium tartrate (Antimony and compounds (as Sb))	0.5		
US - Oregon Permissible Exposure Limits (Z-1)	antimony potassium tartrate (Antimony & Compounds (as Sb))	0.5		

US ACGIH Threshold Limit Values (TLV)	antimony potassium tartrate (Antimony - Compounds)	0.5	Measured as Sb. TLV Basis: skin & upper respiratory tract irritation
Canada - Prince Edward Island Occupational Exposure Limits	antimony potassium tartrate (Antimony - Compounds)	0.5	Measured as Sb. TLV Basis: skin & upper respiratory tract irritation

ENDOELTABLE

## PERSONAL PROTECTION



## RESPIRATOR

Particulate

Consult your EHS staff for recommendations

## EYE

- Safety glasses with side shields.
- Chemical goggles.

## HANDS/FEET

■ Wear chemical protective gloves, eg. PVC.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

## OTHER

- Overalls.
- Eyewash unit.

## ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

State	Divided solid	Molecular Weight	324.92
Melting Range (°F)	212	Viscosity	Not Available
Boiling Range (°F)	Not available.	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not Available	pH (1% solution)	< 7
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not Available	Vapour Pressure (mmHG)	Not applicable
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	2.6
Lower Explosive Limit (%)	Not Available	Relative Vapor Density (air=1)	Not applicable

Volatile Component (%vol)	Not applicable	Evaporation Rate	Not applicable
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## APPEARANCE

Transparent crystals (effloresce on exposure to air) or powder. Sweetish, metallic taste. Soluble in water, glycerol. Insoluble in alcohol. Aqueous solution slightly acidic.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

- Avoid storage with reducing agents.
- Avoid strong bases.

Avoid reaction with oxidizing agents.

Segregate from tannic acid, alkalies and their carbonates, reducing agents, lead salts, astringent infusions (cinchona, rhubarb etc.), acacia, antipyrine, mercury bichloride, perchloric acid.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

ANTIMONY POTASSIUM TARTRATE

### TOXICITY AND IRRITATION

#### ANTIMONY POTASSIUM TARTRATE:

- Not available. Refer to individual constituents.

### CARCINOGEN

ANTIMONY COMPOUNDS	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65-MC
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## Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
antimony potassium tartrate			LOW	

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

‡ Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

For small quantities:

- Dissolve the material (in water or acid solution as appropriate) or convert it to a water soluble state with appropriate oxidizing agent.
- Precipitate as the sulfide, adjusting the pH to neutral to complete the precipitation.
- Recycle wherever possible.

- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility

can be identified.

## Section 14 - TRANSPORTATION INFORMATION



DOT:

Symbols: None Hazard class or Division: 6.1

Identification Numbers: UN1551 PG: III

Label Codes: 6.1 Special provisions: IB8, IP3, T1, TP33

Packaging: Exceptions: 153 Packaging: Non- bulk: 213

Packaging: Exceptions: 153 Quantity limitations: 100 kg

Passenger aircraft/rail:

Quantity Limitations: Cargo 200 kg Vessel stowage: Location: A aircraft only:

Vessel stowage: Other: None

Hazardous materials descriptions and proper shipping names:

Antimony potassium tartrate

### Air Transport IATA:

ICAO/IATA Class: 6.1 ICAO/IATA Subrisk: None

UN/ID Number: 1551 Packing Group: III

Special provisions: None

Cargo Only

Packing Instructions: 619 Maximum Qty/Pack: 200 kg

Passenger and Cargo Passenger and Cargo

Packing Instructions: 619 Maximum Qty/Pack: 100 kg

Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity

Packing Instructions: Y619 Maximum Qty/Pack: 10 kg

Shipping Name: ANTIMONY POTASSIUM TARTRATE

### Maritime Transport IMDG:

IMDG Class: 6.1 IMDG Subrisk: None

UN Number: 1551 Packing Group: III

EMS Number: F-A , S-A Special provisions: None

Limited Quantities: 5 kg Marine Pollutant: Yes

Shipping Name: ANTIMONY POTASSIUM TARTRATE

## Section 15 - REGULATORY INFORMATION

**antimony potassium tartrate (CAS: 28300-74-5,11071-15-1) is found on the following regulatory lists;**

"Canada Domestic Substances List (DSL)", "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)", "US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List", "US - Massachusetts Oil & Hazardous Material List", "US - New Jersey Right to Know Hazardous Substances", "US - Pennsylvania - Hazardous Substance List", "US CWA (Clean Water Act) - List of Hazardous Substances", "US CWA (Clean Water Act) - Reportable Quantities of Designated Hazardous Substances", "US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides", "US DOE Temporary Emergency Exposure Limits (TEELs)", "US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act"

## Section 16 - OTHER INFORMATION

### Ingredients with multiple CAS Nos

Ingredient Name CAS antimony potassium tartrate 28300-74-5, 11071-15-1

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).



■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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Issue Date: Oct-6-2008

Print Date:Dec-9-2010