Antimony Potassium Tartrate (Tartar Emetic)

Section 1 – Identification of the substance/mixture and of the company/undertaking		
Product Identifier/Name:	Antimony potassium tartrate trihydrate	
Trade Name and Synonyms:	Tartar Emetic	
Chemical Name:	L+ Antimony Potassium Tartrate $C_8H_4K_2OI_2Sb_2*3H_2O$	
Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:	Uses at industrial sites: Formulation; PC 20: Products such as ph-regulators, flocculants, precipitants, neutralization agents; PC 21: Laboratory chemicals; PC 14: Metal surface treatment products; PC 15: Non-metal-surface treatment products.	
Restrictions On Use:	All not explicitly identified	
Details of the Supplier:	ATPGroup 2 Madison Ave. Larchmont, NY 10538 USA Telephone: 914-834-1881 Fax: 914-834-4611 www.atpgroup.com	**Questions Contact:** compliance@atpgroup.com **Emergency Phone:** 800-424-9300 – CHEMTREC (24/7) – within USA & Canada +1 703-527-3887 – CHEMTREC (24/7) – International & Maritime (707) 836-6840 – ATPGroup
Section 2 – Hazards Identification		
GHS Classification and Labelling of the Substance or Mixture:		
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)	Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 4), H332 Skin irritation (Category 2), H315 Skin sensitization (Category 1), H317 Long-term (chronic) aquatic hazard (Category 2), H411 For the full text of the H-Statements mentioned in this Section, see Section 16	
Label Elements Signal Word: Hazard Statement: Pictogram: Precautionary Statement:	 Danger H301 Toxic if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.  P261 Avoid breathing dust. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment.	

	P280 Wear protective gloves. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.		
Hazards not otherwise classified (HNOC):	There is not any other hazard known.		
Special Provisions:	None		
Section 3 – Composition / Information on Ingredients			
Substances:	L(+) (2R,3R)-2,3-dihydroxybutanedioic acid, antimony potassium salt trihydrate	CAS No. 28300-74-5	100%
Mixtures: Composition comments:			
Section 4 – First Aid Measures			
Description of First Aid Measures:	**Inhalation**: After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician. **Ingestion**: If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. **Skin Contact**: In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician. **Eye Contact**: After eye contact: rinse out with plenty of water. Remove contact lenses.		
Most Important Symptoms and Effects, acute and delayed:	The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Exposure to the substance causes respiratory system irritation if inhaled, and skin/eyes irritation. Depending on the dose and the exposure time, the substance may produce dermatitis.		
Indication of Any Immediate Medical Attention and Special Treatment Needed:	Treatment should in general be symptomatic and palliative.		
General information			
Section 5 – Firefighting Measures			

Extinguishing Media:	Suitable extinguishing media: Water, Foam, Carbon dioxide (CO2), Dry powder Unsuitable extinguishing media: None
Special Hazards Arising from the Substance or Mixture:	Carbon oxides Potassium oxides Antimony oxide Combustible Development of hazardous combustion gases or vapors possible in the event of fire.
Special Protective Equipment and Precautions for Firefighters:	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further Information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Section 6 – Accidental Release Measures	
Personal Precautions, Protective Equipment, Emergency Procedures:	**For non-emergency personnel**: Avoid breathing the dust and contact with skin or eyes, leave the contaminated area. **For emergency personnel**: (a) wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing; (b) removal of ignition sources, provision of sufficient ventilation, control of dust; and (c) emergency procedures such as the need to evacuate the danger area or to consult an expert.
Environmental Precautions:	The substance is toxic for aquatic life. Avoid the release to drains, surface and ground water.
Methods and Material for Containment and Clean-up:	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to Other Sections:	For disposal see section 13.
Section 7 – Handling And Storage	
Precautions For Safe Handling:	**Advice on safe handling:** Work under hood. Do not inhale the substance. **Hygiene measures:** Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.
Conditions For Safe Storage:	**Recommended material:** The containers material should be metal (with inside P.E. bag), Paper (with inside P.E. bag), glass or plastic tightly closed. **Storage conditions:** Store in a dry well-ventilated area, at room temperature. Keep away from food and drink. Keep locked up or in an area accessible only to qualified or authorized people. **Temperature and moisture range/limits**: There is no temperature range limits in normal way of use. **Storage class** (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects
Incompatibilities:	Strong oxidizers, acids, halogenated acids
Specific End Use:	Apart from the uses mentioned in section 1 no other specific uses are stipulated

Section 8 – Exposure Controls / Personal Protection

Control Parameters:

Ingredients with workplace control parameters

Component	CAS-No	Value	Control parameters	Basis
dipotassium bis[μ-tartrato(4−)]diantimonate(2−) trihydrate	28300-74-5	TWA	0.5 mg/m^3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.5 mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.5 mg/m^3	USA. NIOSH Recommended Exposure Limits
		PEL	0.5 mg/m^3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Exposure controls

Engineering Controls: immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment:

The selection of personal protection equipment changes depending on potential exposure conditions such as applications, handling, concentration and ventilation. The information presented below is based on normal use.

Respiratory protection: Needed in case of dust. Wear suitable respiratory protection – minimum efficiency of 95.0 % (EN-149 – type FFP3 filter).

Hand protection: The types of gloves to be considered are: Chemical resistant gloves. Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands (as disposable overalls ISO 13982-1 or EN 13034). Gloves should be checked and replaced regularly because they wear out, can break and lose their protective effectiveness.

Eye protection: Use safety chemical face shield according to EN 136.

Body protection: Wear specific protective clothes to avoid a repeated exposure. Chemical resistant boots (EN 13287, EN 13832-1 or EN ISO 20344)

General Hygiene:

Wash after handling material and before eating, drinking or smoking. Routinely, wash work clothing and protective equipment. Replace clothes and shoes that cannot be cleaned.

Environmental Controls

Avoid spills on soil, water or wastes, except those aspects indicated in the hazardous wastes' regulation. See sections 6, 7, 12, 13.

	The present ones want to be general indications, for a correct choice of the personal protection, an assessment of exposure to chemical agents specific to the use department must be carried out, from this, an indication of the protection more suited to the actual conditions of use, will be obtained; the use of the product in solution implies a reshaping of the choices of the protection compared to those recommended.		
Section 9 – Physical and Chemical Properties			
Information on Basic Physical and Chemical Properties:			
Appearance: Color	Powder, Colorless, transparent or White	**Flammability:**	Not applicable
Odor:	Non data available	**Upper Flammability/Explosive Limit:**	Not applicable
Odor Threshold:	Not applicable	**Lower Flammability/Explosive Limit:**	Not applicable
pH:	3.5-4.5 at 20 ºC	**Vapor Pressure:**	9.9E-13 Pa (at 25ºC)
Melting Point:	231.6 – 233 ºC	**Vapor Density:**	No data available
Freezing Point:	Not applicable	**Relative Density:**	2.6 g/cm^3
Boiling Point:	666.8 ºC (QSAR predicted value)	**Water Solubility:**	83 g/L at 20 ºC
Boiling Range:	No data available	**Partition Coefficient: n-octanol/water:**	-7.28 l(og Pow)
Flash Point:	No data available	**Auto Ignition Temperature:**	No data available
Evaporation Rate:	No data available	**Decomposition Temperature:**	No data available
Molecular Weight:	667.85	**Viscosity:**	Not applicable
Granulometry:	46-52 µm	**Oxidizing properties:**	None
Section 10 – Stability and Reactivity			
Reactivity:	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.		
Chemical Stability:	The substance does not show any reactivity hazards under normal conditions. Avoid oxidant or acid substances.		
Hazardous Polymerization:	Polymerization process does not occur.		
Possibility of Hazardous Reaction	Avoid contact with oxidant substances or mixtures.		
Conditions to Avoid:	Avoid high temperatures		
Incompatible Materials:	Oxidants, strong acids.		
Hazardous Decomposition Products	At high temperatures, toxic gases may be released: Stibine or potassium oxides		
Section 11 – Toxicological Information			
Information on Toxicological Effects:	**Acute Toxicity:** LD50 Oral - Rat - 115 mg/kg Acute toxicity estimate Inhalation - 1.51 mg/l - dust/mist (Expert judgment)		

	Dermal: No data available **Inhalation**: Data not available (the substance is poorly absorbed via inhalation). **Eye damage/irritation:** The substance is an irritant. It is not foreseeable irreversible eye damage. **Ingestion:** Bibliography data reports DL50 (oral, mouse) = 600 mg/kg bw **Skin corrosivity/Irritation**: No studies were located regarding absorption of antimony in humans following dermal exposure. Only the exposure to high levels of antimony trioxide or a mixture of antimony trioxide and pentoxide suggests that some forms of antimony can be absorbed through the skin. The skin irritation/corrosion was evaluated by the test according to the guideline study OECD No. 439: In Vitro Skin Irritation. Reconstructed Human Epidermis Test Method, yielding a result of positive indication of irritation. The test was performed according to the guideline study OECD 431, the substance showed no corrosive effects. **Sensitization:** There are some data, from tests performed according to OECD Guideline 442D (In Vitro Skin Sensitization: ARE-Nrf2 Luciferase Test Method) that show the following results: The substance is considered positive because the following conditions are met: Imax is >1.5 fold increased and statistically significant ($p<0.05$) compared to the negative control. Cell viability is >70% at the lowest concentration with an induction of luciferase activity >1.5 fold. EC1.5 value is < 1000 µM. This result has been confirmed by the test In vitro Sensitization: human Cell Line Activation Test (h-CLAT): the test item did upregulate the cell surface markers in at least two independent experiment runs. Therefore, the test item is considered to be a skin sensitizer. **Repeated Dose Toxicity:** There is some bibliographic data that showed repeated-dose toxicity: a no-observed adverse effect level (NOAEL) is considered to be at 50 ppm antimony in drinking water (equivalent to a calculated intake of 6 mg kg body weight/day). There is no unequivocal evidence of the carcinogenicity, mutagenicity nor reproduction toxicity effects. Some data, considered not totally reliable, found chromosomal aberrations in intraperitoneally exposure in male rats. **Carcinogenicity:** IARC: 2A - Group 2A: Probably carcinogenic to humans (Dipotassium bis[µ-[tartrato(4-)-o1,o2:o3,o4]]diantimonate(2-) trihydrate) NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

	Mutagenicity:
	Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Remarks: (anhydrous substance) Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) **Reproduction Toxicity:** No data available **Aspiration hazard:** No data available **Chronic effects:** No data available
Further information:	RTECS: CC6825000 Potassium antimony tartrate is the most potent trivalent antimony compound. Trivalent antimony compounds are more toxic than the pentavalent because they are excreted slowly., Gastrointestinal disturbance, Headache, Dizziness, Weakness, Kidney injury may occur. Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence
Section 12 – Ecological Information	
Ecotoxicity:	There are several acute toxicity data for the aquatic life: **Acute Toxicity:** OECD Guideline 201 (Freshwater Alga and Cyanobacteria, Pseudokirchneriella subcapitata, Growth Inhibition Test, 72h) EC50 = 206 mg/L and EC50 = 111 mg/L OECD Guideline 203 (Oryzias latipes, 96 h) EC50 = 120 mg/L, NOEC = 120 mg/L OECD Guideline 203 (Rainbow trout, 4 d) EC50 = 37 mg/L OECD Guideline 202 (Invertebrates) CL50 (Simocephalus mixtus, 24h) = 4.92 mg/L CL50 (Daphnia Magna, 48h) = 6.7 mg/L **Long-term toxicity:** EC50 (Rainbow trout, 30 d) = 16 mg/L OECD Guideline 210 (Oryzias latipes, Early-Life Stage Toxicity Test, 14 d) NOEC = 300 mg/L (Daphnia Magna, Reproduction Toxicity Test, 30 d) NOEC = 0.8 mg/L The comparation between the tests performed indicates that invertebrate may be more sensitive than fish and aquatic plants species. According to Table R.10-4 from Guidance on information requirements and chemical safety assessment Chapter R.10, an assessment factor of 50 is considered regarding the available data, two long-term results (NOECs) from species representing two trophic level

	(fish and Daphnia). Furthermore, the lowest value of the long-term toxicity is used (800 µg/L).
Persistence & Degradability:	Data regarding degradability of the substance: OECD Guideline 310 (Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test) aerobic sludge. Mixed treatment plant of urban (about 66%) and industrial (about 34%) % degradation (TOC removal) = 92% (28 d) The substance is considered readily biodegradable in aerobic conditions.
Bioaccumulation Potential:	There is no evidence of the accumulative effects in animals, but the log Kow<4.5 indicates a low bioaccumulative potential.
Mobility in Soil:	No data available
Results of PBT and vpvB Assessment:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Endocrine disrupting properties:	No data available
Other Adverse Effects:	No data available
Section 13 – Disposal Considerations	
Waste Treatment Methods:	**Product** Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
Section 14 – Transport Information	
DOT	**UN number**: 1551 **Transport Hazard Class**: 6.1 **Packing group**: III **Proper shipping name**: ANTIMONY POTASSIUM TARTRATE **Reportable Quantity (RQ)**: 100 lbs **Poison Inhalation Hazard**: No
IMDG/IMO	**UN number**: 1551 **Transport Hazard Class**: 6.1 **Packing group**: III **Proper shipping name**: ANTIMONY POTASSIUM TARTRATE **EMS-No**: F-A, S-A **Marine pollutant**: yes
IATA	**UN number**: 1551 **Transport Hazard Class**: 6.1 **Packing group**: III **Proper shipping name**: ANTIMONY POTASSIUM TARTRATE
TDG	**UN number**: 1551 **Transport Hazard Class**: 6.1 **Packing group**: III **Proper shipping name**: ANTIMONY POTASSIUM TARTRATE
Section 15 – Regulatory Information	

Safety Health and Environmental Regulations/ Legislation Specific for the Substance or Mixture

USA - Federal regulations

TSCA - US EPA (TSCA) - Toxic Substances Control Act: Not listed

SARA 313:

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Antimony potassium tartrate	28300-74-5	100	1.0

SARA 311/312: Acute Health Hazard, Chronic Health Hazard. See section 2 for more information

CWA - Clean Water Act:

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Antimony potassium tartrate	X	-	X	-

CAA - Clean Air Act:

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Antimony potassium tartrate	X		-

OSHA - Occupational Safety and Health Administration: Not applicable

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act: This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302

Component	Hazardous Substances RQs	CERCLA EHS RQs
Antimony potassium tartrate	100 lb	-

USA - State specific regulations

California Proposition 65: This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Antimony potassium tartrate	X	X	X	X	X

International Regulations

Mexico - Grade No: information available

Authorization/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Antimony potassium tartrate	28300-74-5	-	Use restricted. See item 75. (see link for restriction details)	-

REACH links *https://echa.europa.eu/substances-restricted-under-reach*

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Antimony potassium tartrate	28300-74-5	Not applicable	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Antimony potassium tartrate	28300-74-5	Not applicable	Not applicable	Not applicable	Annex I - Y27

Section 16 – Other Information

HMIS® Ratings	Health: 3 Flammability: Physical hazard:
NFPA Ratings	Health: 2 Flammability: 1 Instability: 0 Physical hazard: N/A
Creation date **Revision date** **Version #**	11/11/2015 9/13/2024 3.0

Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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