

Scientific Documentation

AN140, Antimony Potassium Tartrate, Powder, USP

Not appropriate for regulatory submission. Please visit <u>www.spectrumchemical.com</u> or contact Tech Services for the most up-to-date information contained in this information package.

Spectrum Chemical Mfg Corp

769 Jersey Avenue New Brunswick, NJ 08901 Phone 732.214.1300

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In the following pages, we have designed and prepared documented scientific information to aid you in your initial qualification or your continual use of our products. Please do not hesitate to contact us if further information or the most up-to-date documentation is desired from any of the covered areas.

We appreciate your business and we look forward to hearing from you.

Sincerely,

Alan Wang, MSQA, ASQ CQA Director of Technical Services techservices@spectrumchemical.com

AN140, Antimony Potassium Tartrate, Powder, USP

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| Item Number | <u>AN140</u> |
|-------------------|--|
| Item | Antimony Potassium Tartrate, Powder, USP |
| CAS Number | 28300-74-5 |
| Molecular Formula | $C_8H_4K_2O_{12}Sb_2.3H_2O$ |
| Molecular Weight | 667.87 |
| MDL Number | |
| Synonyms | Potassium Antimonyl Tartrate ; Tartar Emetic |

| Test | Specification | |
|-------------------------------------|----------------|--------------|
| | Min | Max |
| ASSAY ($C_8H_4K_2O_{12}Sb_2.3HO$) | 99.0 - 103.0 % | |
| COMPLETENESS OF SOLUTION | | TO PASS TEST |
| ACIDITY / ALKALINITY | | TO PASS TEST |
| LOSS ON DRYING | | 2.7 % |
| ARSENIC (As) | | 0.015 % |
| LEAD (Pb) | | 0.002 % |
| IDENTIFICATION | | TO PASS TEST |
| EXPIRATION DATE | | |
| RESIDUAL SOLVENTS | | TO PASS TEST |

Spectrum Chemical Mfg Corp

| Corporate Headquarters: | West Coast Facility: |
|-------------------------|------------------------|
| 769 Jersey Ave. | 14422 S. San Pedro St. |
| New Brunswick, NJ 08901 | Gardena, CA 90248 |
| 732.214.1300 | 310.516.8000 |

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SAFETY DATA SHEET

| Preparation Date: 10/27/2016 | Revision Date: Not Applicable | Revision Number: Not Applicable |
|--|---|---|
| | 1. IDENTIFICATION | |
| Product identifier | | |
| Product code: Product Name: | AN140 ANTIMONY POTASSIUM TARTRATE, POV | NDER, USP |
| Other means of identification | _ | |
| Synonyms: CAS #: RTECS # CI#: | Antimonate(2)-, bis(mu-tartrato(4-))di-, dipot Antimonyl potassium tartrate Tartrate antimonio-potassique [French]; Emetique (French) Potassium antimonyl tartrate trihydrate Tartar emetic Tartaric acid, antimony potassium salt, trihyd Tartarized antimony Tartox Tartrated antimony Potassium antimonyl tartrate Potassium antimonyl d-tartrate Potassium antimonyl d-tartrate Potassium antimony tartrate Tartaric acid, antimony potassium salt Antimonate(2-), bis[.mu[2,3-di(hydroxykappa.O)butanedic potassium, hydrate (1:2:3), stereoisomer (C. Antimonate(2-), bis[.mu[2,3-di(hydroxykappa.O)butanedic dipotassium, trihydrate, stereoisomer (9CI) Antimonate(2-), bis[.mu[2,3-dihydroxybutar dipotassium, trihydrate, stereoisomer Butanedioic acid, 2,3-dihydroxy- [R-(R*,R*)]- Antimonate(1-), aqua[tartrato(4-)]-, potassium Antimonate(1-), oxo(tartrato)-, potassium se Antimonium tartaricum Antimonyl potassium tartrate, sesquihydrate Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, a Dipotassium dimud-tartrato(4-)-bis(antimo 28300-74-5 CC6825000 Not available Emical and restrictions on use Mordant in textile and leather industries. No information available | drate pato(4-)kappa.O1:.kappa.O4]]di-, A INDEX NAME) pato(4-)kappa.O1:.kappa.O4]]di-, nedioato(4-)-O1,O2:O3,O4]]di-, -, antimony complex m, sesquihydrate, dimer esquihydrate, dimer |
| Supplier: | Spectrum Chemical Mfg. Corp 14422 South San Pedro St. Gardena, CA 90248 | |
| Product code: AN140 | Product name: ANTIMONY POTASSIUM TARTRATE, POWDER, USP | 1 / 13 |

Order Online At: Emergency telephone number Contact Person: Contact Person: (310) 516-8000. <u>https://www.spectrumchemical.com</u> Chemtrec 1-800-424-9300 Martin LaBenz (West Coast) Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| Acute toxicity - Oral | Category 3 |
|--|------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Specific target organ toxicity (repeated exposure) | Category 2 |

Label elements

Danger

Hazard statements Toxic if swallowed Harmful if inhaled Causes skin irritation Causes serious eye irritation May cause respiratory irritation May cause damage to organs through prolonged or repeated exposure



Hazards not otherwise classified (HNOC) Not Applicable

<u>Other hazards</u> Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Do not eat, drink or smoke when using this product Wear protective gloves Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Wash face, hands and any exposed skin thoroughly after handling

Product code: AN140

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Rinse mouth

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|-----------------------------|------------|----------|
| Antimony Potassium Tartrate | 28300-74-5 | 100 |

4. FIRST AID MEASURES

First aid measures

| General Advice: | National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself. |
|------------------------------------|--|
| Skin Contact: | Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician. |
| Eye Contact: | Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician. |
| Inhalation: | Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Toxic if swallowed. Immediate medical attention is required. Call a physician or Poison Control Center immediately. |
| Most important symptoms and effect | ts, both acute and delayed |
| Symptoms | Toxic if swallowed. Harmful by inhalation. Causes skin irritation. Causes eye irritation. Irritating to respiratory system. May cause damage to organs through prolonged or repeated exposure. |
| Indication of any immediate medica | l attention and special treatment needed |

Product code: AN140

Notes to Physician:

Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

| 5. FIRE-FIGHTING MEASURES | | | |
|---|--|--|--|
| <u>Extinguishing Media</u> Suitable Extinguishing Media: | Dry chemical. Carbon dioxide (CO2). Water spray mist or foam. | | |
| Unsuitable Extinguishing Media: | No information available. | | |
| Specific hazards arising from the chemical | | | |
| Hazardous Combustion Products: | Carbon Dioxide, Carbon Monoxide. Potassium oxides. Antimony/Antimony oxides. | | |
| Specific hazards: | May be combustible at high temperatures Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard | | |
| Special Protective Actions for Firefighters | | | |
| Specific Methods: | No information available. | | |
| Special Protective Equipment for Firefighters: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear | | |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal Precautions: | Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition. | | | |
|--|---|--|--|--|
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas. | | | |
| Methods and material for containment and cleaning up | | | | |
| Methods for containment | Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading. | | | |
| Methods for cleaning up | Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly. | | | |

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible

Product code: AN140

materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors/dust. Avoid dust formation. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Acids Halogenated acids Mineral acids Tannic and Gallic acids Reducing agents Strong oxidizing agents carbonates Lead salts Alkali hydroxides Mercury bichloride Lime water Albumin Bases Lead Silver salts

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | CAS-No. | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|--------------------|------------|-------------------------------|-------------------------------|-------------------------------|------------|
| Antimony Potassium | 28300-74-5 | 0.5 mg/m ³ TWA (as | 0.5 mg/m ³ TWA (as | 0.5 mg/m ³ TWA (as | None |
| Tartrate | | Sb) | Sb) | Sb) | |

Canada

| Components | CAS-No. | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|--------------------------------|------------|--------------------------|------------------------------|------------------|-----------------|
| Antimony Potassium Tartrate | 28300-74-5 | 0.5 mg/m³ TWA (as Sb) | 0.5 mg/m³ TWA (as Sb) | None | None |

Australia and Mexico

| Components | CAS-No. | Australia | Mexico |
|-----------------------------|------------|-----------------------------------|-----------------------------------|
| Antimony Potassium Tartrate | 28300-74-5 | 0.5 mg/m ³ TWA (as Sb) | 0.5 mg/m ³ TWA (as Sb) |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other

engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

| Eye protection: | Goggles or Safety glasses with side-shields |
|---------------------------|---|
| Skin and body protection: | Long sleeved clothing. Chemical resistant apron. Gloves. |
| Respiratory protection: | Wear respirator with dust filter. or. Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. |
| Hygiene measures: | Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Odor: Odorless.

Molecular/Formula weight: 667.87

Flash Point Tested according to: Not available

Upper Explosion Limit (%): No information available

Boiling point/range(°C/°F): No information available

Specific gravity: 2.6

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: No information available

Product code: AN140

Appearance: Powder.

Taste Sweetish. Metallic.

Flammability: No information available

Autoignition Temperature (°C/°F): No information available

Melting point/range(°C/°F): 100°C (212°F)

Bulk density: 1.3

pH: 4 at 20°C (68°F)

Vapor density: No information available

Partition coefficient (n-octanol/water): No information available

Solubility: Insoluble in Alcohol Soluble in Water Solubility in Water: 9 g/100 ml @ 25 °C

Color: White.

Formula: C8-H4-K2-O12-Sb2.3H2O

Flashpoint (°C/°F): No information available.

Lower Explosion Limit (%): No information available

Decomposition temperature(°C/°F): No information available

Density (g/cm3): 2.6

Vapor pressure @ 20°C (kPa): No information available

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

Reactivity

Reactive with strong oxidizing agents

| Chemical stability | |
|--------------------------------------|---|
| Stability: | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | : Hazardous polymerization does not occur |
| Conditions to avoid: | Heat. Avoid dust formation. Incompatible materials. |
| Incompatible Materials: | Acids Halogenated acids Mineral acids Tannic and Gallic acids Reducing agents Strong oxidizing agents carbonates Lead salts Alkali hydroxides Mercury bichloride Lime water Albumin Bases Lead Silver salts |
| Hazardous decomposition products: | Carbon monoxide. Carbon dioxide. When heated to decomposition it emits toxic fumes. Oxides of potassium. Antimony. Antimony oxide. |
| Other Information Corrosivity: | No information available |

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Skin. Eyes. Ingestion. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document Component Information

| Antimony Potassium Ta | artrate | |
|-----------------------|-------------------------|--|
| CAS-No. | 28300-74-5 | |
| LD50/oral/rat = | 115 mg/kg Oral LD50 Rat | |

LD50/oral/rat = 115 mg/kg Oral LD50 Rat LD50/oral/mouse = 600 mg/kg LD50/dermal/rabbit = No information available LD50/dermal/rat = 115 mg/kg Oral LD50 LC50/inhalation/rat = No information available LC50/inhalation/mouse = No infomation available Other LD50 or LC50information = 115 mg/kg oral LD50 [Rabbit]

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = No information available mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = No information available mg/kg

LD50/dermal/rabbit VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = No information available VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

| Skin Contact: | Causes skin irritation. | | | | | |
|-------------------------------|---|----------------------|--|--|--|--|
| Eye Contact: | Causes eye irritation. | | | | | |
| Inhalation | Harmful by inhalation. Irritating to respiratory system. Symptoms may include coughing and shortness of breath. | | | | | |
| Ingestion | Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause abdominal pain. May cause salivation. May cause ulcerations in the esophagus and stomach. May cause muscle weakness May affect liver. May affect urinary system (kidneys). May cause mydriasis (dilar pupils). May affect the cardiovascular system (hypotension). May affect respirate (dyspnea - difficulty breathing and shortness of breath; hyperventilation). May affect the cardiovascular system (slow heart rate (bradycardia)). May affect cardiovascular system (hypotension, cardiac arrhythmias). May cause hemolytic anemia. May affect behavior/central nervous system (somnolence). May affect behavior/central nervous system (somnolence). May affect behavior/central nervous system (hallucinations, distorted perceptions, irritability, loss of sleep). | ted ion c y | | | | |
| Aspiration hazard | No information available. | | | | | |
| Delayed and immediate effects | as well as chronic effects from short and long-term exposure | | | | | |
| Chronic Toxicity | Chronic exposure may affect the liver, kidneys, and blood. Prolonged or repeate ingestion may affect the cardiovascular system. Prolonged or repeated ingestior may cause weight loss. | | | | | |
| Product code: AN140 | Product name: ANTIMONY 8 / POTASSIUM TARTRATE, POWDER, USP | 13 | | | | |

Sensitization:

No information available.

Mutagenic Effects:

May affect genetic material

Carcinogenic effects:

Not considered carcinogenic.

| Components | CAS-No. | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|--------------------------------|------------|------------|------------------------|------------|---------------------------|---|---|
| Antimony Potassium Tartrate | 28300-74-5 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

| Reproductive toxicity | No data is available |
|---|--|
| Reproductive Effects: Developmental Effects: | No information available No information available |
| Teratogenic Effects: | No information available |

Specific Target Organ Toxicity

| STOT - single exposure | No information available. |
|--------------------------|---|
| STOT - repeated exposure | No information available. |
| Target Organs: | Liver. Kidneys. Respiratory system. Lungs. Eyes. Skin. Cardiovascular system. |

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:

- Persistence and degradability: No information available
- **Bioaccumulative potential:** No information available.
- Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | CAS-No. | RCRA - F Series | RCRA - K Series | RCRA - P Series | RCRA - U Series |
|------------|---------|-----------------|-----------------|-----------------|-----------------|

Product code: AN140

| Product name: ANTIMONY |
|-----------------------------|
| POTASSIUM TARTRATE, POWDER, |
| USP |

| | | Wastes | Wastes | Wastes | Wastes |
|--------------------------------|-----------|--------|--------|--------|--------|
| Antimony Potassium Tartrate 28 | 8300-74-5 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

| DOT | |
|--|---|
| UN-No: | UN1551 |
| Proper Shipping Name: | Antimony potassium tartrate |
| Hazard Class: | 6.1 |
| Subsidiary Class | No information available |
| Packing group: | III |
| Emergency Response Guide | 151 |
| Number | |
| Marine Pollutant | No data available |
| DOT RQ (lbs): | No information available |
| Special Provisions | IB8, IP3, T1, TP33 |
| Symbol(s): | No information available |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |
| | |
| TDG (Canada) | |
| UN-No: Proper Shipping Name: | UN1551 Antimony potassium tartrate |
| Proper Shipping Name: Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | |
| Marine Pollutant | No Information available |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |
| Booonption | |
| ADR | |
| UN-No: | UN1551 |
| Proper Shipping Name: | Antimony potassium tartrate |
| Hazard Class: | 6.1 |
| Packing Group: | III |
| Subsidiary Risk: | No information available |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |
| IMO / IMDG | |
| UN-No: | UN1551 |
| Proper Shipping Name: | Antimony potassium tartrate |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | |
| Marine Pollutant | No information available |
| EMS: | F-A |
| Description | UN1551, Antimony potassium tartrate, 6.1, III |
| | |
| RID | |
| UN-No: | UN1551 |
| Proper Shipping Name: | Antimony potassium tartrate |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | 6.1 III |
| Packing Group: | |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |
| ICAO | |
| UN-No: | UN1551 |
| Proper Shipping Name: | Antimony potassium tartrate |
| · · · · | |
| Product code: AN140 | Product name: ANTIMONY |
| - | POTASSIUM TARTRATE, POWDER, |
| | LISP |

| Hazard Class: | 6.1 |
|--|---|
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |
| IATA UN-No: Proper Shipping Name: Hazard Class: Subsidiary Risk: Packing Group: | UN1551 Antimony potassium tartrate 6.1 No information available III |
| ERG Code: | 6L |
| Special Provisions | No information available |
| Description: | UN1551, Antimony potassium tartrate, 6.1, III |

15. REGULATORY INFORMATION

International Inventories

| Components | CAS-No. | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|--------------------------------|------------|------------|-------------|------------------------|-------------|---------|---------------------|-------------|
| Antimony Potassium Tartrate | 28300-74-5 | Not Listed | Not present | Present | Not present | Present | Present | Not present |

U.S. Regulations

Antimony Potassium Tartrate Massachusetts RTK: Present New Jersey RTK Hazardous Substance List: 0145 New Jersey - Discharge Prevention - List of Hazardous Substances: Present Pennsylvania RTK: Environmental Hazard Pennsylvania RTK - Environmental Hazard List Present Minnesota - Hazardous Substance List: Present (as Antimony compounds) New York Release Reporting - List of Hazardous Substances: 100 lb RQ Louisana Reportable Quantity List for Pollutants: 100lbfinal RQ 45.4kgfinal RQ California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | CAS-No. | Carcinogen | Developmental Toxicity | | Female Reproductive |
|-----------------------------|------------|------------|------------------------|------------|------------------------|
| | | | | Toxicity | Toxicity: |
| Antimony Potassium Tartrate | 28300-74-5 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|--------------------|------------|---|---|--|------------------------------------|--|
| Antimony | 28300-74-5 | 100 lb final RQ | None | None | None | None |
| Potassium Tartrate | | 45.4 kg final RQ | | | | |

U.S. TSCA

| Components | | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|-----------------------------|------------|---|---|
| Antimony Potassium Tartrate | 28300-74-5 | Not Applicable | Not Applicable |

Canada

WHMIS hazard class:

D1B Toxic materials

Components

Antimony Potassium Tartrate

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|-----------------------------|------------------------------------|
| Antimony Potassium Tartrate | 1% (as Antimony compounds) |

WHIMHAZ

D1B

Inventory

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|-----------------------------|------------|--------------|---------------|
| Antimony Potassium Tartrate | 28300-74-5 | Present | Not Listed |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances |
|-----------------------------|------------|--------------------------------------|
| Antimony Potassium Tartrate | 28300-74-5 | Not listed |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject |
| | | to Mandatory Reporting |
| Antimony Potassium Tartrate | 28300-74-5 | Not listed |

EU Classification

R-phrase(s)

R20 - Harmful by inhalation.

R22 - Harmful if swallowed.

R51 - Toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

R36/38 - Irritating to eyes and skin.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 - Wear suitable gloves.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

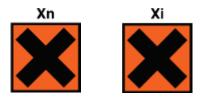
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

| Components | CAS-No. | Concentration Limits: | Safety Phrases |
|--------------------------------|------------|------------------------------|----------------|
| Antimony Potassium Tartrate | 28300-74-5 | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful. Xi - Irritant.



16. OTHER INFORMATION

Preparation Date: Revision Date: Prepared by: 10/27/2016 Not Applicable Roumann Pangilinan

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet



Manufacturer

Product Covered: AN140, Antimony Potassium Tartrate, Powder, USP

Spectrum takes ownership as the manufacturer for the Spectrum product listed above and provides full quality assurance, customer service, and technical product support.

While information concerning the raw material manufacturer of our starting materials is considered proprietary, such information can be made available upon request contingent on demonstration of business volume justification and successful execution of confidential disclosure agreement (CDA).

Requests for disclosure of proprietary raw material manufacturer information may be submitted to the assigned account representative for consideration.

Sincerely,

Alan Wang, MSQA, ASQ CQA Director of Technical Services techservices@spectrumchemical.com

Certificate of Registration



This is to certify that the quality management system of

Spectrum Chemicals and Laboratory Products, Frc

Main Site: 14422 South San Pedro Street, Gardena, California, 90248, USA

Additional Sites: 13915 South Main Street, Los Angeles, California, 90061, USA 755 Jersey Avenue, New Brunswick, New Jersey, 08901, USA 769 Jersey Avenue, New Brunswick, New Jersey, 08901, USA 7400 North Oracle Road, Suite 221, Tucson, Arizona, 85704, USA

has been assessed and registered by Intertek as conforming to the requirements of

ISO 9001:2008

The quality management system is applicable to

California and New Jersey sites: The manufacture and distribution of specialty fine chemicals, solutions, equipment, supplies and products for the laboratory, pharmaceutical, food, healthcare, cosmetic, fragrance, biotechnology, environmental and process industries.

Arizona site: Supporting Spectrum's two manufacturing facilitates by: selecting and gualifying distributors of Laboratory and Safety Equipment; processing bids and quotes to generate new sales opportunities; sourcing bulk chemicals in support of bulk bids and guotes; assisting production operations through order expediting and IT infrastructure support.

Certificate Number: 94-316m-01 Initial Certification Date: 27 December 1994 Certificate Issue Date: Certificate Expiry Date:

29 January 2016 14 September 2018

Calin Moldovean, President

Intertek Testing Services NA, Inc.

900 Chelmsford Street, Suite 301-3, Lowell, MA, USA



CERTIFICATION



Intertek Intertek

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed via email at certificate.validation@intertek.com or by scanning the code to the right with a smartphone.

Certificate of Registration



This is to certify that the quality management system of

Spectrum China Ltd.

Building A20, No. 3802, Shengang Road, Songjiang District, Shanghai, China

has been assessed and registered by Intertek as conforming to the requirements of

ISO 9001: 2008

The quality management system is applicable to:

Provision of service of purchase, testing and sales for chemical products, repacking of non-hazardous chemical products.

Organization Code: Certificate Number: Certificate Issue Date: Certificate Expiry Date: 77762704-8 111310001-01 17 November 2015 14 September 2018



014

Authorised Signature: Calin Moldovean – President, Business Assurance Intertek Certification Limited, 10A Victory Park, Victory Road, Derby DE24 8ZF, United Kingdom Intertek Certification Limited is a UKAS accredited body under schedule of accreditation no. 014.

In the issuance of this certificate, Intertek assumes no liability to any party other than to the client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed via email at <u>certificate.validation@intertek.com</u> or by scanning the code to the right with a smartphone. The annual validity of the certificate a also be checked through the website <u>http://www.cnca.gov.cn</u> of CNCA in China.



The certificate remains the property of Intertek, to whom it must be returned upon request.



January 03, 2017

Certificate of cGMP

Dear Valued Customer:

Spectrum Chemicals and Laboratory Products certifies that our USP, NF, FCC, EP, BP, JP, and food grade products are produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

Spectrum is an FDA registered and inspected drug establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follow:

Spectrum Gardena, California: <u>2020632</u> Spectrum New Brunswick, New Jersey: <u>2246824</u>

Thank you for your interest with Spectrum products. Please feel free to contact me at 310-516-8000, extension 5610 or via email at <u>mdang@spectrumchemical.com</u> if I may be of further assistance.

Sincerely,

Michael Dang Manager, GMP Compliance

CORPORATE HEADQUARTERS

769 Jersey Avenue New Brunswick, NJ 08901 PHONE 732.214.1300 FAX 732.246.7132 WEST COAST FACILITY

14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843



July 14, 2016

Certificate of cGMP

Dear Valued Customer:

Spectrum Chemicals and Laboratory Products certify that the following product(s) is produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

| Catalog Number | Product Name |
|----------------|--|
| AN140 | Antimony Potassium Tartrate, Powder, USP |

Spectrum is an FDA registered and inspected drug establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follows:

<u>2020632</u> <u>2246824</u> 3006174778

| Spectrum-Gardena, CA: |
|-----------------------------|
| Spectrum-New Brunswick, NJ: |
| Spectrum-Shanghai, China: |

Thank you for your interest with Spectrum products. Please feel free to contact the Quality Assurance department at 310-516-8000 or via email at <u>qualityassurance@spectrumchemical.com</u> if we may be of further assistance.

Sincerely,

Oulu Clamy

Oralia Chavez Quality Assurance Specialist



June 2, 2016

Re: Antimony Potassium Tartrate, Powder, USP- AN140

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

We at Spectrum Chemical Mfr. Corp. understand the concern regarding Bovine Spongiform Encephalopathy (BSE). Please be assured that the chemical

Antimony Potassium Tartrate, Powder, USP- AN140

is BSE/TSE free.

If you have any further questions, please contact Tech Services at (310) 516-8000 Extension 5471, or by email at <u>techservices@spectrumchemical.com</u>.

Sincerely,

Darlene Dagdag-Lyudmirskiy Technical Services Spectrum Chemical Mfr. Corp.

This document has been produced electronically and is valid without a signature



June 2, 2016

Re: Antimony Potassium Tartrate, Powder, USP- AN140

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

We at Spectrum Chemical Mfr. Corp. understand the concern regarding the presence of allergens in raw materials. Please be assured that the following chemical does not contain (Milk; Egg; Fish; Shellfish; Sulfur dioxide and sulfites at concentrations of more than 10 mg/kg or 10 mg/liter expressed as SO₂; Tree nuts; Mollusks; Wheat; Peanuts; Soy; Cereals containing Gluten; Celery; Mustard; Sesame Seed).

Antimony Potassium Tartrate, Powder, USP- AN140

If you have any further questions, please contact Tech Services at (310) 516-8000 Extension 5471, or by email at <u>techservices@spectrumchemical.com</u>.

Sincerely,

Darlene Dagdag-Lyudmirskiy Technical Services Spectrum Chemical Mfr. Corp.

This document has been produced electronically and is valid without a signature

Spectrum®

Certificate Of Analysis

| Item Number | AN140 | Lot Number | 2FJ0126 |
|-------------------|--|------------------|---------|
| Item | Antimony Potassium Tartrate, Powder, USP | | |
| CAS Number | 28300-74-5 | | |
| Molecular Formula | $C_{\delta}H_{4}K_{2}O_{12}Sb_{2}.3H_{2}O$ | Molecular Weight | 667.87 |

| Test | Specification | | Result |
|-------------------------------------|----------------|--------------|--------------------------------|
| | min | max | |
| ASSAY ($C_8H_4K_2O_{12}Sb_2.3HO$) | 99.0 - 103.0 % | | 101.0 % |
| COMPLETENESS OF SOLUTION | | TO PASS TEST | PASSES TEST |
| ACIDITY / ALKALINITY | | TO PASS TEST | PASSES TEST |
| LOSS ON DRYING | | 2.7 % | <2.7 % |
| ARSENIC (As) | | 0.015 % | <0.015 % |
| LEAD (Pb) | | 0.002 % | <0.002 % |
| IDENTIFICATION | | TO PASS TEST | PASSES TEST |
| EXPIRATION DATE | | | 23-DEC-2020 |
| RESIDUAL SOLVENTS | | TO PASS TEST | NO RESIDUAL SOLVENTS USED |
| APPEARANCE | | | WHITE CRYSTALLINE POWDER |
| DATE OF MANUFACTURE | | | 23-DEC-2015 |

Spectrum Chemical Mfg Corp 755 Jersey Avenue New Brunswick 08901 NJ



Certificate Of Analysis Results Certified by

Ibad Tirmizi Director of Quality Spectrum Chemical Mfg. Corp.

All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

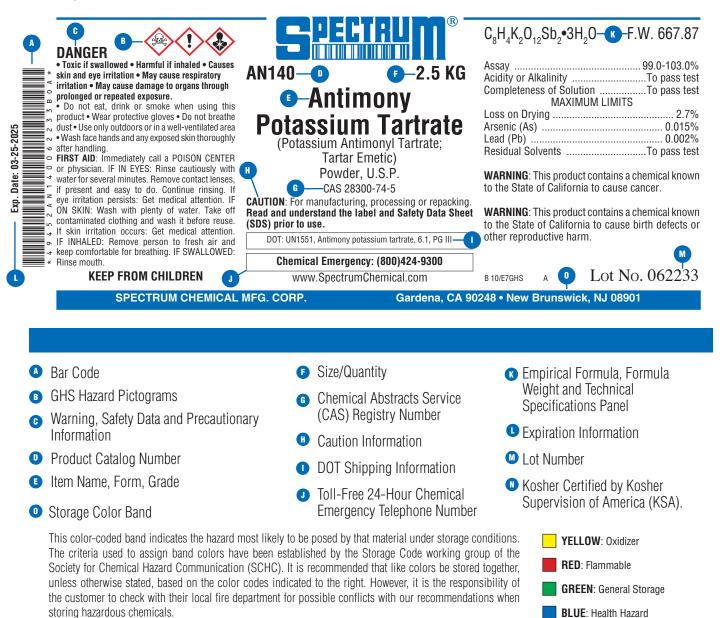
Read and understand label and MSDS/SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personal only. The customer must ensure to provide its users adequate hazardous material training and appropriate protective gears before handling our chemicals.



WHITE: Corrosive

Label Information

The Spectrum label presents technical and safety information in an easily understood format. Our technical specialists stay abreast of the latest requirements of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS), as well as the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA) and other government regulatory agencies in order to ensure compliance, accuracy and concise hazard communication.



Spectrum Chemical Mfg Corp

Corporate Headquarters: 769 Jersey Ave. New Brunswick, NJ 08901 West Coast Facility: 14422 S. San Pedro St. Gardena, CA 90248

732.214.1300

310.516.8000



January 26, 2016

RE: Lot Numbering System

Dear Valued Customer:

This letter is to inform you of Spectrum Chemicals and Laboratory Products' Lot Numbering System. The system is based on an alpha-numerical sequence which provides the month, year and location of production.

The lot numbering system utilized until 2010 is a sequence of **six characters**, two letters followed by four numbers. The first letter represents the year, for example, Y denotes 2009 and Z denotes 2010. The second letter represents the month and site, for example, A-L denotes January through December at Spectrum's Gardena, CA facility, while M-X denotes January through December at the New Brunswick, NJ facility. The following four numbers are sequentially assigned.

Example: ZI0928 = The 928th material produced in California in September 2010

The lot numbering system utilized for 2011 and forward, is a sequence of **seven characters**. The first character, a number, represents the production facility:

1 = Gardena, CA Facility 2 = New Brunswick, NJ Facility 3 = China Facility

The second character, a letter, represents the year. For example, A denotes 2011 and B denotes 2012. The third character, a letter, represents the month, with A denoting January and L denoting December. The following four numbers are sequentially assigned.

Example: 2AA0706 = The 706th material produced in New Jersey in January 2011

Thank you for your interest with Spectrum products. Please feel free to contact us at 310-516-8000 or via email at <u>qualityassurance@spectrumchemical.com</u> if we may be of further assistance.

Sincerely,

1 lan

Michael Dang Manager, GMP Compliance



Stability – Shelf Life Guidance

Product Covered: AN140, Antimony Potassium Tartrate, Powder, USP

Spectrum Chemical's manufacturing partner has assigned the following shelf life guidance for the product listed above.

The product, AN140, Antimony Potassium Tartrate, Powder, USP, is assigned a 60 months shelf life from date of manufacturing. The quality and integrity of the chemical depends on the handling and storage conditions. Please refer to the Safety Data Sheet for proper storage and handling procedures.

Adan R. Hernandez Quality Control Manager

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Corporate Headquarters 769 Jersey Avenue New Brunswick, NJ 08901-3605