SAFETY DATA SHEET

Preparation Date: 8/12/2015  Revision Date: 10/22/2018  Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: AM162
Product Name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP

Other means of identification
Synonyms:
Aminocardol
Cardiofilina
Cardiomin
Cardophylin
Diophyllin
Diaphylline
Euphylin
Metaphyline
Methophylline
Neophyline
Phylcardin
Phyllindon
Somophyllin
TAD
Tefamin
Theophyllaminium
Theophyllin ethylenediamine
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl-, compd. with 1,2-ethanediame (2:1) (9CI)
3,7-Di hydro-1,3-dimethyl-1H-purine-2,6-dione compd. with 1,2-ethanediame (2:1)

CAS #: 317-34-0
RTECS #: XH5600000
CI#: Not available

Recommended use of the chemical and restrictions on use
Recommended use: Medication. Drug.
Uses advised against: No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

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

2. HAZARDS IDENTIFICATION

Classification

Product code: AM162  Product name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP
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)

<table>
<thead>
<tr>
<th>Acute toxicity - Oral</th>
<th>Category 3</th>
</tr>
</thead>
</table>

**Label elements**

**Danger**

**Hazard statements**
Toxic if swallowed

![Poison Symbol]

**Hazards not otherwise classified (HNOC)**
Not Applicable

**Other hazards**
Not available

**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

**Precautionary Statements - Response**
*Specific treatment (see .? on this label)*
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

**Precautionary Statements - Storage**
Store locked up

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminophylline, Anhydrous</td>
<td>317-34-0</td>
<td>100</td>
</tr>
</tbody>
</table>

### 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.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.
**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 not breathing, give artificial respiration. If breathing is difficult, give oxygen. **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. Get medical attention.

**Ingestion:** Toxic if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

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### Most important symptoms and effects, both acute and delayed

**Symptoms**

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea
May affect the nervous system
May affect behavior/central nervous system
It may affect the heart
It may affect the immune system
It may affect the blood
May affect respiration
Abdominal discomfort, nausea, vomiting, cramping
Seizures
May cause anorexia
May cause drowsiness or dizziness
May cause cardiovascular effects
May cause metabolic acidosis
Irritability
May affect behavior/central nervous system (tremor, convulsions)
Excitement
Dehydration
Thirst
Insomnia
Weak, rapid pulse or rapid heart rate (Tachycardia)
Hypotension
Respiratory paralysis or failure

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**Indication of any immediate medical attention and special treatment needed**

**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.

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## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**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 Monoxide, Carbon Dioxide. Nitrogen Oxides.

**Specific hazards:** May be combustible at high temperatures.

**Product code:** AM162  **Product name:** AMINOPHYLLINE, ANHYDROUS, POWDER, USP
**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.

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing dust. Avoid dust formation. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering 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. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

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### 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 materials.

**Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Do not ingest. Do not breathe dust. 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. Keep in a dry, well-ventilated place. Store at controlled room temperature. Excursions between 15°C/59°F and 30°C/86°F that are experienced in pharmacies, hospitals, and warehouses and during shipping are allowed. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**National occupational exposure limits**

**United States**

**Product code:** AM162  
**Product name:** AMINOPHYLLINE, ANHYDROUS, POWDER, USP
### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. 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:** Safety glasses with side-shields. or Goggles
- **Skin and body protection:**
  - Chemical resistant apron
  - Long sleeved clothing
  - Gloves
- **Respiratory protection:** 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. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Appearance:</th>
<th>Color:</th>
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</thead>
<tbody>
<tr>
<td>Solid</td>
<td>Powder.</td>
<td>White.</td>
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<table>
<thead>
<tr>
<th>Odor:</th>
<th>Taste</th>
<th>Formula:</th>
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</table>

<table>
<thead>
<tr>
<th>Molecular/Formula weight (g/mole):</th>
<th>Flammability:</th>
<th>Flashpoint (°C/°F):</th>
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</thead>
<tbody>
<tr>
<td>420.43 g/mol</td>
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</table>

<table>
<thead>
<tr>
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<th>Autoignition Temperature (°C/°F):</th>
<th>Lower Explosion Limit (%):</th>
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<tbody>
<tr>
<td>Not available</td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

| Upper Explosion Limit (%):       | |
|----------------------------------| |

**Product code:** AM162  
**Product name:** AMINOPHYLLINE, ANHYDROUS, POWDER, USP
10. STABILITY AND REACTIVITY

Reactivity
Reactive with oxidizing agents

Chemical stability
Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization does not occur
Incompatible Materials: Oxidizing agents
Hazardous decomposition products: Carbon oxides. Nitrogen oxides (NOx).

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: Ingestion. Inhalation.

Acute Toxicity

Component Information

<table>
<thead>
<tr>
<th>Aminophylline, Anhydrous</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>317-34-0</td>
<td></td>
</tr>
</tbody>
</table>

Product code: AM162
Product name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP
LD50/oral/rat = 243 mg/kg Oral LD50 Rat
LD50/oral/mouse = 150 mg/kg oral LD50 mouse
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 184 mg/kg oral LD50 guinea pig

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = 243 mg/kg
LD50/oral/mouse = Value - Acute Tox Oral = 150 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: May cause skin irritation.
Eye Contact: May cause eye irritation.
Inhalation May cause respiratory tract irritation.
Ingestion Toxic if swallowed. May affect behavior/central nervous system (convulsions, seizures). May cause nausea, abdominal cramps, eigastric pain, vomiting, diarrhea, extreme thirst, dehydration, diuresis, anorexia. May affect behavior/central nervous system/nervous system (headache, lightheadedness, nervousness, insomnia, tremors, dizziness, agitation, delirium, restlessness, mild excitement or irritability, drowsiness,hyperreflexia, fasciculations, clonic and tonic convulsions), cardiovascular system (palpitations, tachycardia, arrhythmias, rapid pulse, hypotension, extrasystoles, circulatory and respiratory failure, shock), respiration (increased respiratory rate), skin eruptions (urticaria). May cause hyperglycemia, metabolic acidosis.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated ingestion may have symptoms similar to that of acute ingestion. Prolonged or repeated ingestion may cause a decreased immune response. Prolonged or repeated ingestion may affect the blood (changes in

Product code: AM162  Product name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP
serum composition).

Sensitization:  No information available.

Mutagenic Effects:  May affect genetic material

Carcinogenic effects:  Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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<tbody>
<tr>
<td>Aminophylline, Anhydrous</td>
<td>317-34-0</td>
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<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
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</tbody>
</table>

**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:  May cause adverse reproductive effects based on animal data

Expected to cross the placenta

Developmental Effects:  No information available

Teratogenic Effects:  May cause birth defects (teratogenic effects) based on animal test data

Specific Target Organ Toxicity

STOT - single exposure  No information available.

STOT - repeated exposure  No information available.

Target Organs:  Nervous system. Heart. Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:  No data available.

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. Do not re-use empty containers. Dispose of as unused product.

Product code:  AM162  Product name:  AMINOPHYLLINE, ANHYDROUS, POWDER, USP
--- | --- | --- | --- | --- | ---
Aminophylline, Anhydrous | 317-34-0 | None | None | None | None

**14. TRANSPORT INFORMATION**

**DOT**

| UN-No: | UN2811 |
| Proper Shipping Name: | Toxic solids, organic, n.o.s. (aminophylline) |
| Hazard Class: | 6.1 |
| Subsidiary Class | No information available |
| Packing group: | III |
| Emergency Response Guide Number | 154 |

**TDG (Canada)**

| UN-No: | UN2811 |
| Proper Shipping Name: | Toxic solid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Marine Pollutant | No Information available |
| Description: | UN2811, Toxic solid, organic, n.o.s., 6.1, III |

**ADR**

| UN-No: | UN2811 |
| Proper Shipping Name: | Toxic solid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Packing Group: | III |
| Subsidiary Risk: | No information available |
| Description: | UN2811, Toxic solid, organic, n.o.s., 6.1, III |

**IMO / IMDG**

| UN-No: | UN2811 |
| Proper Shipping Name: | Toxic solids, organic, n.o.s. (aminophylline) |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Marine Pollutant | No information available |
| EMS: | F-A |
| Special Provisions | 223, 274 |
| Description: | UN2811, Toxic solid, organic, n.o.s. (AMINOPHYLLINE, ANHYDROUS), 6.1, III |

**RID**

| UN-No: | UN2811 |
| Proper Shipping Name: | Toxic solid, organic, n.o.s. |
| Hazard Class | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |

**Product code:** AM162  **Product name:** AMINOPHYLLINE, ANHYDROUS, POWDER, USP
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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</thead>
<tbody>
<tr>
<td>Aminophylline, Anhydrous</td>
<td>317-34-0</td>
<td>PresentACTIVE</td>
<td>Present KE-10630</td>
<td>Present</td>
<td>Not present</td>
<td>Present</td>
<td>Present</td>
<td>Present 206-264-5</td>
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</tbody>
</table>

U.S. Regulations


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)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
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</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
<tr>
<td>Aminophylline, Anhydrous</td>
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U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
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<tbody>
<tr>
<td>Product code: AM162</td>
<td>Product name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP</td>
<td></td>
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</tr>
</tbody>
</table>
Canada

WHIMIS 2015 - GHS Classifications

WHIMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA Schedule I - Toxic Substances</th>
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<tbody>
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<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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</thead>
<tbody>
<tr>
<td>Aminophylline, Anhydrous</td>
<td>317-34-0</td>
<td>EU GHS - SV - CLP (1272/2008)</td>
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</tbody>
</table>

EU - CLP (1272/2008)

R-phrase(s)
R25 - Toxic if swallowed.

S-phrase(s)
S46 - If swallowed, seek medical advice immediately and show this container or label.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<tbody>
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<td>Aminophylline, Anhydrous</td>
<td>317-34-0</td>
<td></td>
<td>No information</td>
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</tbody>
</table>

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

Indication of danger:
T - Toxic

16. OTHER INFORMATION

Product code: AM162
Product name: AMINOPHYLLINE, ANHYDROUS, POWDER, USP
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