1. IDENTIFICATION

Product identifier

Product code: N2352
Product Name: NICOTINE DITARTRATE, DIHYDRATE

Other means of identification

Synonyms: Nicotine bitartrate dihydrate; Nicotine acid tartrate dihydrate; Nicotine hydrogen tartrate, dihydrate
CAS #: 6019-06-3
RTECS #: Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
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

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>
<tbody>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 1</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label elements

Danger

Hazard statements

Toxic if swallowed
Fatal in contact with skin
Fatal if inhaled
Suspected of damaging fertility or the unborn child
Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
Wear protective gloves
Wear eye/face protection

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Gently wash with plenty of soap and water
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</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. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Wash off immediately with plenty of

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
water. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

**Eye Contact:**
Flush eyes with water for 15 minutes. Get medical attention.

**Inhalation:**
Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. 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. Immediate medical attention is required. Toxic if swallowed.

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

**Symptoms**
- May cause gastritis
- May cause abdominal pain, nausea, vomiting, diarrhea
- May cause salivation
- Sweating
- May affect the cardiovascular system
- Central nervous system effects

**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.

5. **FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:**
Dry powder. 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. When heated to decomposition it emits toxic gases and irritating fumes.

**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.

**Product code:** N2352  **Product name:** NICOTINE DITARTRATE, DIHYDRATE
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. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not let this chemical enter the environment. 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 materials. All equipment used when handling the product must be grounded. Remove all sources of ignition.

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

Conditions for safe storage, including any incompatibilities


Incompatible Materials: Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
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<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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<td>None</td>
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Canada

<table>
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<tr>
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<th>CAS-No.</th>
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<th>Canada - British Columbia</th>
<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
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
Skin and body protection: Long sleeved clothing
Gloves
Chemical resistant apron
Respiratory protection: Effective dust mask or Wear respirator with dust filter. 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

<table>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Odor: No information available.</td>
<td>Taste No information available.</td>
<td>Formula: C18H26N2O12.2H2O</td>
</tr>
<tr>
<td>Molecular/Formula weight: 498.44 g/mole</td>
<td>Flammability: No information available</td>
<td>Flashpoint (°C/°F): No information available</td>
</tr>
<tr>
<td>Flash Point Tested according to: Not available</td>
<td>Autoignition Temperature (°C/°F): No information available</td>
<td>Lower Explosion Limit (%): No information available</td>
</tr>
<tr>
<td>Upper Explosion Limit (%): No information available</td>
<td>Melting point/range(°C/°F): 97-100°C (206.6-212°F)</td>
<td>Decomposition temperature(°C/°F): No information available</td>
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<td>Boiling point/range(°C/°F): No information available</td>
<td>Bulk density: No information available</td>
<td>Density (g/cm3): No information available</td>
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<tr>
<td>Specific gravity: No information available</td>
<td>pH: No information available</td>
<td>Vapor pressure @ 20°C (kPa): No information available</td>
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</table>

Product code: N2352
Product name: NICOTINE DITARTRATE, DIHYDRATE
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


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. Skin.

Acute Toxicity

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50/oral/rat</th>
<th>LD50/oral/mouse</th>
<th>LD50/dermal/rabbit</th>
<th>LD50/dermal/rat</th>
<th>LC50/inhalation/rat</th>
<th>LC50/inhalation/mouse</th>
<th>Other LD50 or LC50 information</th>
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</thead>
<tbody>
<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
<td>65 mg/kg Oral LD50 Rat (for Nicotine Ditartrate (CAS 65-31-6))</td>
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</table>

Product Information

Product code: N2352
Product name: NICOTINE DITARTRATE, DIHYDRATE
LD50/oral/rat = VALUE - Acute Tox Oral = No information available

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

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. Fatal if absorbed through skin. If absorbed through skin it may cause systemic effects with symptoms similar to those of ingestion.

Eye Contact: May cause eye irritation.

Inhalation Fatal if inhaled. May cause respiratory tract irritation. May cause other symptoms similar to those of ingestion.

Ingestion Toxic if swallowed. May cause gastritis. May cause abdominal pain, nausea, vomiting, diarrhea. May cause excessive sweating. May cause salivation. May affect behavior (convulsions, headache, rigidity change in motor activity, confusion, agitation, restlessness followed by lethargy). May affect the cardiovascular system (hypotension or hypertension, tachycardia). May affect the cardiovascular system (slow heart rate (bradycardia)). May affect respiration.

Aspiration hazard No information available.

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

Chronic Toxicity No information available.

Sensitization: No information available.

Mutagenic Effects: No information available

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>Nicotine Ditartrate, Dihydrate 6019-06-3</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>
<td>Not listed</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
Reproductive toxicity: Suspected of damaging fertility or the unborn child

Reproductive Effects: May cause adverse reproductive effects
Developmental Effects: May cause adverse developmental effects
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Target Organs: No information available.

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

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

UN-No: UN1659
Proper Shipping Name: Nicotine tartrate
Hazard Class: 6.1
Subsidiary Class: No information available
Packing group: II
Emergency Response Guide Number: 151
Marine Pollutant: Severe Marine Pollutant

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
15. REGULATORY INFORMATION

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
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>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</td>
<td>Not Listed</td>
<td>Present KE-25881</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>Present 200-607-2</td>
</tr>
</tbody>
</table>

U.S. Regulations

**Nicotine Ditartrate, Dihydrate**

- **New Jersey RTK Hazardous Substance List**: sn 2583 (listed as Nicotine and salts)
- **New Jersey (EHS) List**: SN 2853 500 lb. TPQ (listed as Nicotine and salts)
- **New Jersey - Discharge Prevention - List of Hazardous Substances**: Present (listed as Nicotine and salts)
- **New York Release Reporting - List of Hazardous Substances**: Present; 100 lb. RQ (listed as Nicotine and salts)
- **Louisiana Reportable Quantity List for Pollutants**: Present 100 lb./45.4 kg final RQ (listed as Nicotine and salts)

**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)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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<tbody>
<tr>
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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>Nicotine Ditartrate, Dihydrate</td>
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<td>100 lb./45.4 kg final RQ (listed as Nicotine and salts)</td>
<td>None</td>
<td>Nicotine and Salts</td>
<td>1.0 % de minimis concentration</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 (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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</thead>
<tbody>
<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

**WHIMIS 2015 - GHS Classifications**

- **WHIMIS 2015 Hazard Classification Information:** The WHIMIS 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

**WHIMIS 1988 Hazard Class**

- D1B  Toxic materials

**Product code:** N2352  **Product name:** NICOTINE DITARTRATE, DIHYDRATE
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.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA Schedule I - Toxic Substances</th>
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<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
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<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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<tr>
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EU Classification

EU GHS - SV - CLP 1272/2008

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>EU GHS - SV - CLP (1272/2008)</th>
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</thead>
<tbody>
<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</td>
<td></td>
</tr>
</tbody>
</table>

EU - CLP (1272/2008)

R-phrase(s)

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S -phrase(s)

S13 - Keep away from food, drink and animal feedingstuffs.
S28 - After contact with skin, wash immediately with plenty of water
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.
S 1/2 - Keep locked up and out of the reach of children.

<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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<tr>
<td>Nicotine Ditartrate, Dihydrate</td>
<td>6019-06-3</td>
<td>T+; R26/27/28</td>
<td>N; 51/53</td>
<td>S1/2 S13 S28 S45 S61</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+ - Very toxic.
N - Dangerous for the environment.

16. OTHER INFORMATION

Preparation Date: 11/28/2016
Revision Date: 3/1/2018
Prepared by: Sonia Owen

Product code: N2352  Product name: NICOTINE DITARTRATE, DIHYDRATE
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