SAFETY DATA SHEET

1. Identification

Product identifier | Nicotine Related Compound D

Other means of identification

Catalog number | 1463359
Synonyms | Myosmine fumarate
Chemical name | 3-(4,5-Dihydro-3H-pyrrol-2-yl)pyridine fumarate

Recommended use | Specified quality tests and assay use only.

Recommended restrictions | Not for use as a drug. Not for administration to humans or animals.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name | U. S. Pharmacopeia
Address | 12601 Twinbrook Parkway
          | Rockville
          | MD
          | 20852-1790
          | United States

Telephone | RS Technical Services
Website | www.usp.org
E-mail | RSTECH@usp.org

Emergency phone number

CHEMTREC within US & Canada | 1-800-424-9300
CHEMTREC outside US & Canada | +1 703-527-3887

2. Hazard(s) identification

Physical hazards | Not classified.
Health hazards | Acute toxicity, oral
Category 4
Environmental hazards | Not classified.
OSHA defined hazards | Not classified.

Label elements

Signal word | Warning
Hazard statement | Harmful if swallowed.
Precautionary statement

Prevention | Wash thoroughly after handling.
Response | If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
Storage | Not available.
Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) | None known.

Supplemental information | Pharmaceutical related compound of unknown potency.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine Related Compound D</td>
<td>Myosmine fumarate</td>
<td>No Data</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
4. First-aid measures

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed
Pharmaceutical related compound of unknown potency. It is not known if occupational exposure may cause physiological effects.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

5. Fire-fighting measures

Suitable extinguishing media
Water. Foam. Dry chemical or CO2. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
No unusual fire or explosion hazards noted.

Special protective equipment and precautions for firefighters
Wear suitable protective equipment.

Fire fighting equipment/instructions
Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Avoid the generation of dusts during clean-up. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling
As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential.

Conditions for safe storage, including any incompatibilities
Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

8. Exposure controls/personal protection

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred. For laboratory operations, use approved ventilation or containment system (biological safety cabinet, ventilated balance enclosure, glovebox). No open handling.
Individual protection measures, such as personal protective equipment

**Eye/face protection**
Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.

**Skin protection**

**Hand protection**
Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. Consider double gloves.

**Other**
Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. Train employees in proper gowning and degowning practices. Wear disposable lab coat, disposable sleeve covers and two pair of gloves as appropriate for the task.

**Respiratory protection**
Choose respiratory protection appropriate to the task and the level of existing engineering controls. Use a powered air-purifying respirator (PAPR) with HEPA filters, disposable outerware and head cover for spill cleanup.

**Thermal hazards**
Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**
Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment. Pharmacological effects may be seen with occupational exposure.

### 9. Physical and chemical properties

**Appearance**
Appearance descriptions are general information and not specific to any USP lot.

- **Physical state**: Solid.
- **Form**: Powder.
- **Color**: White. Light brown.

**Odor**
Not available.

**Odor threshold**
Not available.

**pH**
Not available.

**Melting point/freezing point**
Not available.

**Initial boiling point and boiling range**
Not available.

**Flash point**
Not available.

**Evaporation rate**
Not available.

**Flammability (solid, gas)**
Not available.

**Upper/lower flammability or explosive limits**

- **Flammability limit - lower (%)**
  Not available.
- **Flammability limit - upper (%)**
  Not available.
- **Explosive limit - lower (%)**
  Not available.
- **Explosive limit - upper (%)**
  Not available.

**Vapor pressure**
Not available.

**Vapor density**
Not available.

**Relative density**
Not available.

**Solubility(ies)**

- **Solubility (water)**
  Not available.

**Auto-ignition temperature**
Not available.

**Decomposition temperature**
Not available.

**Viscosity**
Not available.

**Other information**

- **Chemical family**: Alkaloid.
- **Molecular formula**: C9H10N2.C4H4O4
- **Molecular weight**: 262.26
10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
None known.

Hazardous decomposition products
NOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

11. Toxicological information

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Symptoms related to the</td>
<td>Not available.</td>
</tr>
<tr>
<td>physical, chemical, and</td>
<td></td>
</tr>
<tr>
<td>toxicological characteristics</td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td></td>
<td>The base of this material showed low acute oral toxicity.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Knowledge about health hazard is incomplete.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Knowledge about mutagenicity is incomplete.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Knowledge about carcinogenicity is incomplete.</td>
</tr>
</tbody>
</table>

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
Knowledge about health hazard is incomplete.

Specific target organ toxicity - single exposure
Knowledge about health hazard is incomplete.

Specific target organ toxicity - repeated exposure
Knowledge about health hazard is incomplete.

Aspiration hazard
Based on available data, the classification criteria are not met.

Further information
Pharmaceutical related compound of unknown potency. It is not known if occupational exposure may cause physiological effects.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
No data is available on the degradability of this substance.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
13. Disposal considerations

**Disposal instructions**
Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

**Local disposal regulations**
Dispose in accordance with all applicable regulations.

**Hazardous waste code**
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

**DOT**
Not regulated as dangerous goods.

**IATA**
Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable.

**General information**
It is the shipper's responsibility to determine the correct transport classification at the time of shipment.

15. Regulatory information

**US federal regulations**
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
  Not regulated.
- **CERCLA Hazardous Substance List (40 CFR 302.4)**
  Not listed.
- **SARA 304 Emergency release notification**
  Not regulated.
  Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**
- **SARA 302 Extremely hazardous substance**
  Not listed.
- **SARA 311/312 Hazardous chemical**
  Yes
- **Classified hazard categories**
  Acute toxicity (any route of exposure)
- **SARA 313 (TRI reporting)**
  Not regulated.

**Other federal regulations**
- **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
  Not regulated.
- **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**
  Not regulated.
- **Safe Drinking Water Act (SDWA)**
  Not regulated.

**US state regulations**
- **California Proposition 65**
  California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.
## International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 04-19-2013  
**Revision date** 01-31-2019  
**Version #** 03

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