

1. Identification

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|---|---|-----------------|--|
| Product identifier | Ergoloid Mesylates | | |
| Other means of identification | | | |
| Catalog number | 1239504 | | |
| Chemical name | Dihydroergotoxine monomethanesulfonate (salt) | | |
| Synonym(s) | Co-dergocrine mesylate * Dihydrogenated ergot alkaloids | | |
| 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 | | | |
| Company name | U. S. Pharmacopeia | | |
| Address | 12601 Twinbrook Parkway Rockville MD 20852-1790 US | | |
| Telephone | RS Technical Services | 301-816-8129 | |
| 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

| | | | |
|-------------------------|---|-------------|--|
| Note | This product is supplied in a small quantity which does not constitute a combustible dust hazard. The physical properties of this material indicate that in large quantities accumulated dust may be hazardous. | | |
| Physical hazards | Not classified. | | |
| Health hazards | Germ cell mutagenicity | Category 1B | |
| | Reproductive toxicity | Category 2 | |
| OSHA hazard(s) | Not classified. | | |
| Label elements | | | |



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|--|--|--|--|
| Signal word | Danger | | |
| Hazard statement | May cause genetic defects. Suspected of damaging fertility or the unborn child. | | |
| Precautionary statement | | | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. | | |
| Response | If exposed or concerned: Get medical advice/attention. | | |
| Storage | Store locked up. | | |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. | | |
| Hazard(s) not otherwise classified (HNOC) | Not classified. | | |

3. Composition/information on ingredients

Substance

Hazardous components

| Chemical name | Common name and synonyms | CAS number | % |
|--------------------|--|------------|-----|
| Ergoloid Mesylates | Co-dergocrine mesylate Dihydrogenated ergot alkaloids | 8067-24-1 | 100 |

4. First-aid measures

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| 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 ingestion of a large amount does occur, call a poison control center immediately. |
| Most important symptoms/effects, acute and delayed | Slow heartbeat. Drowsiness. Dizziness. Gastrointestinal disturbances. |
| Indication of immediate medical attention and special treatment needed | <p>Treatment of ergot alkaloid overdose should be symptomatic and supportive and may include the following:</p> <ol style="list-style-type: none">1. Do NOT induce vomiting because of potential for CNS depression and seizures.2. Consider gastric lavage within one hour of ingestion.3. Administer activated charcoal as a slurry.4. For vasoconstriction and hypertension, nitroprusside is recommended to reverse peripheral ischemia secondary to vasoconstriction and for the treatment of hypertension. Consider intravenous nitroglycerin or phentolamine in patients with evidence of significant end organ ischemia.5. For hypotension, infuse isotonic fluid and place in Trendelenburg position. If hypotension persists, administer dopamine or norepinephrine.6. For seizures, administer a benzodiazepine. If seizures are uncontrollable or recur, consider phenobarbital or propofol.7. For abdominal cramps, administer oral atropine.8. Monitor for hypotension, dysrhythmias, respiratory depression, and the need for endotracheal intubation; evaluate for hypoglycemia, electrolyte disturbances, and hypoxia. [Meditext 2008] |
| 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

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| Suitable extinguishing media | Use fire-extinguishing media appropriate for surrounding materials. Water. Foam. Dry chemical or CO ₂ . |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. |
| 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. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | <p>Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.</p> <p>Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear appropriate personal protective equipment.</p> |
| Methods and materials for containment and cleaning up | Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the generation of dusts during clean-up. For waste disposal, see section 13 of the SDS. Clean surface thoroughly to remove residual contamination. |

7. Handling and storage

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| 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. Use of a designated area is recommended for handling of potent materials. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. |
| 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

Exposure limit values

Industrial Use

| Material | Type | Value |
|------------------------------------|------|------------|
| Ergoloid Mesylates (CAS 8067-24-1) | TWA | 0.01 mg/m3 |

Biological limit values

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

Appropriate engineering controls

Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials. Avoid any open handling of this material, particularly for grinding, crushing, weighing, or other dust-generating or aerosol-generating procedures. Use a laboratory fume hood, vented enclosure, glovebox, or other effective containment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with sideshields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.

Skin protection

Hand protection

Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy. To reduce the risk of contamination of skin and surfaces, wear two pairs of gloves. Remove the outer gloves after handling and cleanup of the material, and remove the inner gloves only after removing other personal protective equipment.

Other

For handling of laboratory scale quantities, a disposable lab coat or isolation gown over street clothes is recommended. Where significant quantities are handled, work clothing and booties may be necessary to prevent take-home contamination.

Respiratory protection

Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134).

Thermal hazards

Not available.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

White to yellowish-white microcrystalline or amorphous powder.

Physical state

Solid.

Form

Powder.

Odor

Odorless or practically odorless.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

384.8 - 402.8 °F (196 - 206 °C) ; also reported as 190 - 194 °C

Initial boiling point and boiling range

Not available.

Flash point

680.00 °F (360.00 °C) (hot plate)

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

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.

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| Relative density | Not available. |
| Solubility in water | Slightly soluble. |
| Partition coefficient (n-octanol/water) | 2.615 |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Chemical family | Ergot derivative; Hydrogenated alkaloids. |
| pH in aqueous solution | 4.2 - 5.2 (0.5% solution) |
| Potential for dust explosion | Positive modified Hartmann tube test |
| Solubility (other) | Soluble in methanol and in ethanol; sparingly soluble in acetone. |

10. Stability and reactivity

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| Reactivity | No reactivity hazards known. |
| Chemical stability | Stable at normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Heat, flames, and sparks. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | NOx, SOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. |

11. Toxicological information

Information on likely routes of exposure

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| Ingestion | Based on available data, the classification criteria are not met. |
| Inhalation | Due to lack of data the classification is not possible. |
| Skin contact | Due to lack of data the classification is not possible. |
| Eye contact | Due to lack of data the classification is not possible. |
| Symptoms related to the physical, chemical, and toxicological characteristics | Dizziness. Drowsiness. Confusion. Headache. Blurred vision. Seizures. Nausea. Vomiting. Cramps. Loss of appetite. Slow heartbeat. Cold hands and feet. Fainting. Flushing. Difficulty breathing. Skin rash. Stuffy nose. |
| Delayed and immediate effects of exposure | Heart valve disorders. Neurological impairment. |
| Cross sensitivity | Persons sensitive to one ergot derivative may be sensitive to this material also. |
| Medical conditions aggravated by exposure | Bradycardia. Hypotension. Sepsis or other severe infection. Impaired liver function. Impaired kidney function. Psychosis. |

Acute toxicity

| Product | Species | Test Results |
|---|---|--------------|
| Ergoloid Mesylates (CAS 8067-24-1) | | |
| Acute | | |
| Oral | | |
| LD50 | Mouse | > 1 mg/kg |
| | Rat | > 2000 mg/kg |
| Skin corrosion/irritation | Due to lack of data the classification is not possible. | |
| Serious eye damage/eye irritation | Due to lack of data the classification is not possible. | |
| Respiratory sensitization | Due to lack of data the classification is not possible. | |
| Skin sensitization | Due to lack of data the classification is not possible. | |
| Germ cell mutagenicity | May cause genetic defects. | |
| Mutagenicity | | |
| Ames test in S. typhimurium | | |
| Result: Negative. | | |
| In vitro sister chromatid exchange assay in human lymphocytes | | |
| Result: Negative. | | |

Mutagenicity

In vivo dominant lethal test in male rodents
Result: Positive.

Carcinogenicity

Due to lack of data the classification is not possible.
This material is not considered to be a carcinogen by IARC, NTP, or OSHA.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.
Ergot alkaloids can decrease fetal blood supply and cause uterine contractions, possibly leading to miscarriage or fetal harm.

Reproductivity

1 mg/day Reproductivity and development study,
administered during the second half of gestation.
Result: Eye and heart defects were observed in the fetuses.
Species: Rat

Specific target organ toxicity - single exposure

Due to lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure

Due to lack of data the classification is not possible.

Aspiration hazard

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

12. Ecological information**Ecotoxicity**

| Product | | Species | Test Results |
|------------------------------------|------|---------------|---------------------|
| Ergoloid Mesylates (CAS 8067-24-1) | | | |
| <i>Acute</i> | | | |
| Algae | IC50 | Algae | 50 mg/l, 72 hours |
| Crustacea | EC50 | Daphnia magna | 59 mg/l, 48 hours |
| <i>Aquatic</i> | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Rainbow Trout | > 76 mg/l, 96 hours |

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Not available.

Mobility in soil

Not available.

Other adverse effects

Not available.

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

Not available.

Hazardous waste code

Not available.

Waste from residues / unused products

Dispose of in accordance with local regulations. 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 a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available.

15. Regulatory information**US federal regulations**

CERCLA/SARA Hazardous Substances - Not applicable.

One or more components are not listed on TSCA.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

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

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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

Issue date 07-22-2008

Revision date 05-01-2014

Version # 02

Further information Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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Revision Information This document has undergone significant changes and should be reviewed in its entirety.