SAFETY DATA SHEET

1. Identification

Product identifier: Granisetron Related Compound D

Other means of identification:
- Catalog number: 1298140
- Chemical name: 1-Methyl-1H-indazole-3-carboxylic acid

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

Physical hazards: Not classified.

Health hazards:
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 2A

OSHA hazard(s): Not classified.

Label elements

Signal word: Warning

Hazard statement: Causes skin irritation. Causes serious eye irritation.

Precautionary statement:
- Prevention: Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.
- Response: If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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.
- Storage: Not available.
- Disposal: Not available.

Hazard(s) not otherwise classified (HNOC): Not classified.

3. Composition/information on ingredients

Substance:

Hazardous components:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
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<tr>
<td>Granisetron Related</td>
<td></td>
<td>50890-83-0</td>
<td>100</td>
</tr>
</tbody>
</table>
4. First-aid measures

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

**Skin contact**
Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

**Eye contact**
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**
Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**Most important symptoms/effects, acute and delayed**
Irritation of eyes, skin, and mucous membranes.

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

**Unsuitable extinguishing media**
None known.

**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.

6. Accidental release measures

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

**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

**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.

**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

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

**Exposure guidelines**
No exposure standards allocated.

**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. Local exhaust ventilation such as a laboratory fume hood or other vented enclosure is recommended, particularly for grinding, crushing, weighing, or other dust-generating procedures.

**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.

Other
   For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing 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
   Pale yellow powder.

Physical state
   Solid.

Form
   Powder.

Odor
   Not available.

Odor threshold
   Not available.

pH
   Not available.

Melting point/freezing point
   415.4 - 429.8 °F (213 - 221 °C)

Initial boiling point and boiling range
   Not available.

Flash point
   Not available.

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.

Relative density
   Not available.

Solubility in water
   Not available.

Partition coefficient (n-octanol/water)
   Not available.

Auto-ignition temperature
   Not available.

Decomposition temperature
   Not available.

Viscosity
   Not available.

Other information
   Molecular formula
      C9H8N2O2

   Molecular weight
      176.18

10. Stability and reactivity

Reactivity
   No reactivity hazards known.

Chemical stability
   Material is stable under normal conditions.

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

Conditions to avoid
   None known.

Incompatible materials

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

Information on likely routes of exposure

**Ingestion**
Due to lack of data the classification is not possible.

**Inhalation**
Due to lack of data the classification is not possible.

**Skin contact**
Causes skin irritation.

**Eye contact**
Causes serious eye irritation.

**Symptoms related to the physical, chemical, and toxicological characteristics**
Irritant effects.

**Acute toxicity**
Not available.

**Skin corrosion/irritation**
Causes skin irritation.

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**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**
Due to lack of data the classification is not possible. Data from germ cell mutagenicity tests were not found.

**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**
Due to lack of data the classification is not possible.

**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**
No ecotoxicity data noted for the ingredient(s).

**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 - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

SARA 302 Extremely hazardous substance: No
SARA 311/312 Hazardous chemical: No

Other federal regulations
- 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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
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<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<tr>
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<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
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</table>

*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: 06-24-2008
Revision date: 02-27-2015
Version #: 02

Further information: Not available.

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