1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier
Material Name: Pantoprazole Sodium for Injection
Trade Name: PROTONIX
Chemical Family: Not determined

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
Intended Use: Pharmaceutical product for the treatment of gastrointestinal disorders

Details of the Supplier of the Safety Data Sheet
Pfizer Inc
Pfizer Pharmaceuticals Group
235 East 42nd Street
New York, New York 10017
1-800-879-3477

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: pfizer-MSDS@pfizer.com

2. HAZARDS IDENTIFICATION

Classification of the Substance or Mixture
GHS - Classification
Acute Oral Toxicity: Category 4
Carcinogenicity: Category 1B
Acute aquatic toxicity: Category 3

US OSHA Specific - Classification
Physical Hazard: Combustible Dust

Label Elements
Signal Word: Danger
Hazard Statements:
H302 - Harmful if swallowed
H350 - May cause cancer
H402 - Harmful to aquatic life
May form combustible dust concentrations in air
Precautionary Statements:

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P281 - Use personal protective equipment as required
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P308 + P313 - IF exposed or concerned: Get medical attention/advice
- P301+ P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell
- P330 - Rinse mouth
- P405 - Store locked up
- P273 - Avoid release to the environment
- P501 - Dispose of contents/container in accordance with all local and national regulations

Other Hazards

Note: This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EINECS/ELINCS List</th>
<th>GHS Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pantoprazole Sodium</td>
<td>138786-67-1</td>
<td>Not Listed</td>
<td>Acute Tox.4 (H302)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc.1B (H350)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 3 (H402)</td>
<td></td>
</tr>
</tbody>
</table>

Additional Information: Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

For the full text of the CLP/GHS abbreviations mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of First Aid Measures

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.
Most Important Symptoms and Effects, Both Acute and Delayed
Symptoms and Effects of Exposure:
For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.
Medical Conditions Aggravated by Exposure:
None known

Indication of the Immediate Medical Attention and Special Treatment Needed
Notes to Physician:
None

5. FIRE FIGHTING MEASURES
Extinguishing Media:
Extinguish fires with CO2, extinguishing powder, foam, or water.

Special Hazards Arising from the Substance or Mixture
Hazardous Combustion Products:
Formation of toxic gases is possible during heating or fire.

Fire / Explosion Hazards:
Fine particles (such as dust and mists) may fuel fires/explosions.

Advice for Fire-Fighters
During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES
Personal Precautions, Protective Equipment and Emergency Procedures
Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Environmental Precautions
Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up
Measures for Cleaning / Collecting:
Contain the source of spill if it is safe to do so. Collect spilled material by a method that controls dust generation. A damp cloth or a filtered vacuum should be used to clean spills of dry solids. Clean spill area thoroughly.

Additional Consideration for Large Spills:
Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE
Precautions for Safe Handling
Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash hands and any exposed skin after removal of PPE. Refer to Section 12 - Ecological Information, for information on potential effects on the environment. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Conditions for Safe Storage, Including any Incompatibilities
Storage Conditions:
Store as directed by product packaging.
Specific end use(s):
Pharmaceutical drug product

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Control Parameters

PZ01408
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Pantoprazole Sodium

Exposure Controls

Engineering Controls: Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

Personal Protective Equipment:

Hands: Impervious gloves are recommended if skin contact with drug product is possible and for bulk processing operations.

Eyes: Wear safety glasses or goggles if eye contact is possible.

Skin: Impervious protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations.

Respiratory protection: Under normal conditions of use, if the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL (e.g. particulate respirator with a half mask, P3 filter). (Respirators must meet the standards in accordance with EN140, EN143, ASTM F2704-10 or international equivalent.)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Freeze-dried powder

Color: White to off-white

Odor: No data available.

Odor Threshold: No data available.

Molecular Formula: C16H14F2N3NaO4S

Molecular Weight: 405.4

Solvent Solubility: No data available

Water solubility: 303 g/L

Water Solubility: No data available

pH: No data available.

Melting/Freezing Point (°C): 149-150

Boiling Point (°C): No data available.

Partition Coefficient: (Method, pH, Endpoint, Value)

Pantoprazole Sodium

No data available

Pantoprazole

Predicted 7.4 Log P 2.05

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s): No data available

Vapor Pressure (kPa): No data available

Vapor Density (g/ml): No data available

Relative Density: No data available

Viscosity: No data available

Flammability:

Autoignition Temperature (Solid) (°C): No data available

Flammability (Solids): No data available

Flash Point (Liquid) (°C): No data available

Upper Explosive Limits (Liquid) (% by Vol.): No data available

Lower Explosive Limits (Liquid) (% by Vol.): No data available
10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical Stability: Stable under normal conditions of use.
Possibility of Hazardous Reactions
  Oxidizing Properties: No data available
  Conditions to Avoid: Fine particles (such as dust and mists) may fuel fires/explosions.
  Incompatible Materials: As a precautionary measure, keep away from strong oxidizers
  Hazardous Decomposition Products: No data available

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects
General Information: The information included in this section describes the potential hazards of various forms of the active ingredients.
Short Term: Accidental ingestion may cause effects similar to those seen in clinical use.
Known Clinical Effects: Adverse effects most commonly reported in clinical use include headache, diarrhea, nausea, and flatulence. May cause mild skin rash. Additionally weight changes, fatigue, malaise, insomnia, sleepiness (somnolence), weakness, and electrolyte imbalance may occur.

Acute Toxicity: (Species, Route, End Point, Dose)

Pantoprazole Sodium
  Rat  Oral  LD 50  747 mg/kg
  Mouse  Oral  LD 50  > 1000mg/kg
  Rat  Intravenous  LD 50  256mg/kg

Acute Toxicity Comments: A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

Reproduction & Development Toxicity: (Duration, Species, Route, Dose, End Point, Effect(s))

Pantoprazole
  Reproductive & Fertility-Males  Rat  Oral  500 mg/kg/day  NOEL  No effects at maximum dose
  Reproductive & Fertility - Females  Rat  Oral  450 mg/kg/day  NOEL  No effects at maximum dose
  Fertility and Embryonic Development  Rat  Oral  450 mg/kg/day  NOEL  Not Teratogenic
  Fertility and Embryonic Development  Rabbit  Oral  40 mg/kg/day  NOEL  Not Teratogenic

Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

Pantoprazole
  Chromosome Aberration  Human Lymphocytes  Positive
  Micronucleus  Mouse  Positive
  Mammalian Cell Mutagenicity  Chinese Hamster Ovary (CHO) cells  Positive
In Vivo DNA Binding Assay  Rat  Equivocal
In Vivo Chromosome Aberration  Rat Bone Marrow  Negative

Carcinogenicity: (Duration, Species, Route, Dose, End Point, Effect(s))

Pantoprazole
  24 Month(s)  Rat  Oral  0.5 mg/kg/day  LOEL  Tumors, Gastrointestinal system, Liver
  24 Month(s)  Rat  Oral  5 mg/kg/day  LOEL  Tumors, Gastrointestinal system
  24 Month(s)  Mouse  Oral  150 mg/kg/day  LOEL  Tumors, Liver
  24 Month(s)  Rat  Oral  200 mg/kg/day  LOEL  Tumors, Thyroid
11. TOXICOLOGICAL INFORMATION

Carcinogen Status: Not listed as a carcinogen by IARC, NTP or US OSHA.

12. ECOLOGICAL INFORMATION

Environmental Overview: Environmental properties have not been investigated. Releases to the environment should be avoided.

Toxicity:
Aquatic Toxicity: (Species, Method, End Point, Duration, Result)

<table>
<thead>
<tr>
<th>Species</th>
<th>Method</th>
<th>End Point</th>
<th>Duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pseudokirchneriella subcapitata</em> (Green Alga)</td>
<td>OECD</td>
<td>EC50</td>
<td>72 Hours</td>
<td>48 mg/L</td>
</tr>
<tr>
<td><em>Daphnia magna</em> (Water Flea)</td>
<td>OECD</td>
<td>EC50</td>
<td>48 Hours</td>
<td>&gt;95 mg/L</td>
</tr>
<tr>
<td><em>Pimephales promelas</em> (Fathead Minnow)</td>
<td>OECD</td>
<td>LC50</td>
<td>96 Hours</td>
<td>&gt;95 mg/L</td>
</tr>
<tr>
<td>Activated sludge</td>
<td>OECD</td>
<td>EC50</td>
<td>3 Hours</td>
<td>&gt; 1000 mg/L</td>
</tr>
</tbody>
</table>

Persistence and Degradability: No data available

Bio-accumulative Potential: No data available

Partition Coefficient: (Method, pH, Endpoint, Value)

<table>
<thead>
<tr>
<th>Pantoprazole</th>
<th>Predicted Log P</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pseudokirchneriella subcapitata</em> (Green Alga)</td>
<td>7.4</td>
<td>2.05</td>
</tr>
</tbody>
</table>

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.
SAFETY DATA SHEET

Material Name: Pantoprazole Sodium for Injection
Revision date: 20-Jun-2016

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Pantoprazole Sodium

| CERCLA/SARA 313 Emission reporting | Not Listed |
| California Proposition 65          | Not Listed |
| EU EINECS/ELINCS List              | Not Listed |

16. OTHER INFORMATION

Text of CLP/GHS Classification abbreviations mentioned in Section 3

Acute toxicity, oral-Cat.4; H302 - Harmful if swallowed
Carcinogenicity-Cat.1B; H350 - May cause cancer
Hazardous to the aquatic environment, acute toxicity-Cat.3; H402 - Harmful to aquatic life

Data Sources: Pfizer proprietary drug development information. Publicly available toxicity information.

Reasons for Revision: Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on Ingredients. Updated Section 16 - Other Information.

Revision date: 20-Jun-2016
Prepared by: Product Stewardship Hazard Communication

Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

End of Safety Data Sheet