

Revision date: 10-Nov-2014

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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

EU Classification:

EU Indication of danger: Harmful Carcinogenic: Category 2

EU Risk Phrases:

R22 - Harmful if swallowed. R45 - May cause cancer.

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 |

Pfizer Ltd Ramsgate Road Sandwich, Kent CT13 9NJ United Kingdom +00 44 (0)1304 616161 Emergency telephone number: International CHEMTREC (24 hours): +1-703-527-3887

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Precautionary Statements: P201 - Obtain

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 Australian Hazard Classification (NOHSC):

Note:

Hazardous Substance. Non-Dangerous Goods.

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

Hazardous

| Ingredient | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification | % |
|---------------------|-------------|-----------------------------|----------------------------|---|-----|
| Pantoprazole Sodium | 138786-67-1 | Not Listed | Xn;R22 Carc. Cat. 2;R45 | Acute Tox.4 (H302) Carc.1B (H350) Aquatic Acute 3 (H402) | 100 |

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

For the full text of the R phrases and 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. |

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| 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 Effect Symptoms and Effects of Exposure: Medical Conditions Aggravated by Exposure: | ts, Both Acute and Delayed For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information. None known |
| Indication of the Immediate Medical Notes to Physician: | Attention and Special Treatment Needed None |
| 5. FIRE FIGHTING MEASURES | 6 |
| Extinguishing Media: | Extinguish fires with CO2, extinguishing powder, foam, or water. |
| Special Hazards Arising from the Su Hazardous Combustion Products: | bstance or Mixture 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 ME | EASURES |
| | uipment and Emergency Procedures 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 |

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters Pantoprazole Sodium Pfizer OEL TWA-8 Hr: 300µg/m³ **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. Refer to applicable national standards and regulations in the selection and use of personal **Personal Protective** protective equipment (PPE). Equipment: Impervious gloves are recommended if skin contact with drug product is possible and for bulk Hands: processing operations. Eyes: Wear safety glasses or goggles if eye contact is possible. Impervious protective clothing is recommended if skin contact with drug product is possible and Skin: for bulk processing operations. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate **Respiratory protection:** respirator with a protection factor sufficient to control exposures to below the OEL.

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 |
| Columnt Colubility | No data available | | |
| Solvent Solubility: | | | |
| Water solubility: | 303 g/L No data available | | |
| Water Solubility: | | | |
| pH: | No data available. | | |
| Melting/Freezing Point (°C): | 149-150 | | |
| Boiling Point (°C): | No data available. | | |
| Partition Coefficient: (Method, pH, E | 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 | | |
| Flammablity: Autoignition Temperature (Solid) (°C): Flammability (Solids): Flash Point (Liquid) (°C): Upper Explosive Limits (Liquid) (% by Vol.): | | No data available No data available No data available No data available | |
| Lower Explosive Limits (Liquid) (% by Vol.): | | No data available | |

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10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Information on Table de de la Cffeete

| Inform | ation on Toxicological Effects | |
|---------|--------------------------------|--|
| Genera | I Information: | The information included in this section describes the potential hazards of various forms of the active ingredients. |
| Short 7 | Term: | Accidental ingestion may cause effects similar to those seen in clinical use. |
| Knowr | 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 Oral 500 mg/kg/day NOEL No effects at maximum dose Rat 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 Not Teratogenic NOEL 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) Oral 0.5 mg/kg/day Tumors, Gastrointestinal system, Liver Rat LOEL LOEL Tumors, Gastrointestinal system 24 Month(s) Rat Oral 5 mg/kg/day Mouse Oral 24 Month(s) 150 mg/kg/day LOEL Tumors, Liver 24 Month(s) 200 mg/kg/day LOEL Tumors, Thyroid Rat Oral

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| 11. TOXICOLOGICAL INFORMATION | | |
|--|---|--|
| Carcinogen Status: | Not listed as a carcinogen by IARC, NTP or US OSHA. | |
| 12. ECOLOGICAL INFORMATI | ON | |
| Environmental Overview: | Environmental properties have not been investigated. Releases to the environment should be avoided. | |
| Toxicity: Aquatic Toxicity: (Species, Method, B | End Point, Duration, Result) | |
| Daphnia magna (Water Flea) OECD Pimephales promelas (Fathead Minnow | | |
| Persistence and Degradability: | No data available | |
| Bio-accumulative Potential: Partition Coefficient: (Method, pH, Er Pantoprazole Predicted 7.4 Log P 2.05 | No data available ndpoint, Value) | |
| 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.

15. REGULATORY INFORMATION

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

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15. REGULATORY INFORMATION

Canada - WHMIS: Classifications WHMIS hazard class: Class D, Division 2, Subdivision A (Bad file name or number)

| 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 R phrases and 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

| Carcinogenic: Category 2 Xn - Harmful | |
|--|---|
| R45 - May cause cancer. R22 - Harmful if swallowed. Data Sources: | Pfizer proprietary drug development information. Publicly available toxicity information. |
| Reasons for Revision: | Updated Section 2 - Hazard Identification. Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking. Updated Section 11 - Toxicology Information. Updated Section 7 - Handling and Storage. Updated Section 3 - Composition / Information on Ingredients. |
| Revision date: | 10-Nov-2014 |
| | Product Stewardship Hazard Communication |
| Prepared by: | Pfizer Global Environment, Health, and Safety Operations |

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