

Revision date: 19-Oct-2015 Version: 2.0 Page 1 of 12

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

Product Identifier

Material Name: Pantoprazole Sodium Delayed-Release Granules, for Suspension

Trade Name: PROTONIX
Chemical Family: Mixture

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

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

2. HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS - Classification

Carcinogenicity: Category 1B

US OSHA Specific - Classification

Physical Hazard: Combustible Dust

Label Elements

Signal Word: Danger

Hazard Statements: H350 - May cause cancer

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

P308 + P313 - IF exposed or concerned: Get medical attention/advice

P405 - Store locked up

P501 - Dispose of contents/container in accordance with all local and national regulations

D700400

Material Name: Pantoprazole Sodium Delayed-Release

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0



Other Hazards Note:

No data available

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.

Page 2 of 12

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Microcrystalline cellulose	9004-34-6	232-674-9	Not Listed	*
Pantoprazole Sodium Sesquihydrate	164579-32-2	Not Listed	Acute Tox.4 (H302) Carc.1B (H350) Aquatic Acute 3 (H402)	22
Sodium lauryl sulfate	151-21-3	205-788-1	Not Listed	*
Talc (non-asbestiform)	14807-96-6	238-877-9	Not Listed	*
Titanium dioxide	13463-67-7	236-675-5	Not Listed	*

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Crospovidone	9003-39-8	Not Listed	Not Listed	*
Ferric oxide yellow	51274-00-1	257-098-5	Not Listed	*
Methacrylic acid copolymer	25086-15-1	Not Listed	Not Listed	*
Polysorbate 80	9005-65-6	Not Listed	Not Listed	*
Triethyl Citrate	77-93-0	201-070-7	Not Listed	*
Povidone	9003-39-8	Not Listed	Not Listed	*
Hydroxypropyl methylcellulose	9004-65-3	Not Listed	Not Listed	*

Additional Information:

* Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace

In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has

been withheld as a trade secret.

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.

Material Name: Pantoprazole Sodium Delayed-Release Page 3 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

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

For information on potential signs and symptoms of exposure, See Section 2 - Hazards

Identification and/or Section 11 - Toxicological Information. Exposure: None known

Aggravated by Exposure:

Medical Conditions

Indication of the Immediate Medical Attention and Special Treatment Needed

Notes to Physician:

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 thoroughly after handling. 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

10 mg/m³ 10 mg/m³

Material Name: Pantoprazole Sodium Delayed-Release Page 4 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

Storage Conditions: Store as directed by product packaging.

Specific end use(s): Pharmaceutical drug product

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ACGIH Threshold Limit Value (TWA)

Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

Microcrystalline cellulose

Australia TWA

Australia I WA	10 mg/m ^o
Belgium OEL - TWA	10 mg/m ³
Estonia OEL - TWA	10 mg/m ³
France OEL - TWA	10 mg/m ³
Ireland OEL - TWAs	10 mg/m ³
	4 mg/m ³
Latvia OEL - TWA	2 mg/m ³
OSHA - Final PELS - TWAs:	15 mg/m ³
Portugal OEL - TWA	10 mg/m ³
Romania OEL - TWA	10 mg/m ³
Russia OEL - TWA	6 mg/m ³
Spain OEL - TWA	10 mg/m ³
Switzerland OEL -TWAs	3 mg/m ³
Vietnam OEL - TWAs	10 mg/m ³
	5 mg/m ³

Pantoprazole Sodium Sesquihydrate

Pfizer OEL TWA-8 Hr: 300µg/m³

Sodium lauryl sulfate

Pfizer OEL TWA-8 Hr: 0.3 mg/m³

Talc (non-asbestiform)

ACGIH Threshold Limit Value (TWA)	2 mg/m³
Australia TWA	2.5 mg/m ³
Austria OEL - MAKs	2 mg/m³
Belgium OEL - TWA	2 mg/m³
Bulgaria OEL - TWA	1.0 fiber/cm3
•	6.0 mg/m ³
	3.0 mg/m ³
Czech Republic OEL - TWA	2.0 mg/m ³
Denmark OEL - TWA	0.3 fiber/cm3
Finland OEL - TWA	0.5 fiber/cm3
Greece OEL - TWA	10 mg/m ³
	2 mg/m³
Hungary OEL - TWA	2 mg/m³

Material Name: Pantoprazole Sodium Delayed-Release Page 5 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Poland OEL - TWA	4.0 mg/m ³
	1.0 mg/m ³
Portugal OEL - TWA	2 mg/m ³
Romania OEL - TWA	2 mg/m ³
Slovakia OEL - TWA	2 mg/m ³
	10 mg/m ³
Slovenia OEL - TWA	2 mg/m³
Spain OEL - TWA	2 mg/m ³
Sweden OEL - TWAs	2 mg/m ³
	1 mg/m ³
Switzerland OEL -TWAs	2 mg/m ³

Titanium dioxide

ACGIH Threshold Limit Value (TWA) 10 mg/m³ **ACGIH OELs - Notice of Intended Changes** Listed 10 mg/m³ Australia TWA Austria OEL - MAKs 5 mg/m³ **Belgium OEL - TWA** 10 mg/m³ 10.0 mg/m³ **Bulgaria OEL - TWA Denmark OEL - TWA** 6 mg/m³ **Estonia OEL - TWA** 5 mg/m³ 10 mg/m³ France OEL - TWA 10 mg/m³ **Greece OEL - TWA** 5 mg/m^3 **Ireland OEL - TWAs** 10 mg/m³ 4 mg/m³ Latvia OEL - TWA 10 mg/m³ 5 mg/m³ Lithuania OEL - TWA **OSHA - Final PELS - TWAs:** 15 mg/m³ **Poland OEL - TWA** 10.0 mg/m³ 10 mg/m³ Portugal OEL - TWA Romania OEL - TWA 10 mg/m³ 10 mg/m³ **Russia OEL - TWA** 10 mg/m³ Spain OEL - TWA Sweden OEL - TWAs 5 ma/m³ **Switzerland OEL -TWAs** 3 mg/m^3 6 mg/m³ Vietnam OEL - TWAs

Exposure Controls

Engineering Controls: General room ventilation is adequate unless the process generates dust, mist or fumes. Keep

5 mg/m³

airborne contamination levels below the exposure limits listed above in this section. Engineering controls should be used as the primary means to control exposures.

Personal Protective Refer to applicable national standards and regulations in the selection and use of personal **Equipment:**

protective equipment (PPE).

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

processing operations.

Eves: 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: 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.

Material Name: Pantoprazole Sodium Delayed-Release Page 6 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Granules Color: Pale yellow to dark brown

Odor: No data available. Odor Threshold: No data available.

Molecular Formula: Mixture Molecular Weight: Mixture

Solvent Solubility:
Water Solubility:
PH:
No data available
No data available
No data available.
No data available.
No data available.
No data available
No data available
No data available.
Partition Coefficient: (Method, pH, Endpoint, Value)

Pantoprazole

Predicted 7.4 Log P 2.05

Pantoprazole Sodium No data available Titanium dioxide No data available

Sodium lauryl sulfate

No data available

Pantoprazole Sodium Sesquihydrate

No data available Crospovidone No data available Ferric oxide yellow

No data available

Methacrylic acid copolymer

No data available **Polysorbate 80**No data available

Povidone

No data available

Triethyl Citrate
No data available

Talc (non-asbestiform)

No data available

Hydroxypropyl methylcellulose

No data available

Microcrystalline cellulose

No data available

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s):

Vapor Pressure (kPa):

Vapor Density (g/ml):

Relative Density:

No data available

Flammablity:

Autoignition Temperature (Solid) (°C):No data availableFlammability (Solids):No data availableFlash Point (Liquid) (°C):No data availableUpper Explosive Limits (Liquid) (% by Vol.):No data available

Material Name: Pantoprazole Sodium Delayed-Release Page 7 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

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 No data available

Products:

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. The remaining information describes the potential hazards of the individual

ingredients.

Short Term: May be harmful if swallowed. (based on animal data) 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.

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

Titanium dioxide

Rat Oral LD50 > 7500 mg/kg Rat Subcutaneous LD50 50 mg/kg

Sodium lauryl sulfate

Rat Oral LD50 1288 mg/kg

Pantoprazole Sodium Sesquihydrate

Rat Oral LD50 ~ 900 mg/kg Mouse Oral LD50 > 700mg/kg Rat Intravenous LD50 240mg/kg

Mouse Intravenous LD50 ~ 370mg/kg

Polysorbate 80

Rat Oral LD50 25 g/kg

Povidone

Rat Oral LD50 100 g/kg

Talc (non-asbestiform)

Material Name: Pantoprazole Sodium Delayed-Release Page 8 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

11. TOXICOLOGICAL INFORMATION

Rat Oral LD50 > 1600 mg/kg

Hydroxypropyl methylcellulose

Rat Oral LD50 > 10,000 mg/kg

Microcrystalline cellulose

Rat Oral LD50 > 5000 mg/kg Rabbit Dermal LD50 > 2000 mg/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.

Irritation / Sensitization: (Study Type, Species, Severity)

Sodium lauryl sulfate

Eye Irritation Rabbit Moderate
Skin Irritation Rabbit Mild Moderate
Skin Sensitization - GPMT Guinea Pig Negative
Skin Sensitization - LLNA Mouse Negative

Microcrystalline cellulose

Skin Irritation Rabbit Non-irritating Eye Irritation Rabbit Non-irritating

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

Pantoprazole Sodium Sesquihydrate

1 Year(s) Rat Oral 300 mg/kg/day LOEL Thyroid 1 Year(s) Dog Oral 60 mg/kg/day LOEL Thyroid

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

Pantoprazole

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

Sodium lauryl sulfate

Bacterial Mutagenicity (Ames) Salmonella Negative

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

D700400

Material Name: Pantoprazole Sodium Delayed-Release Page 9 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

11. TOXICOLOGICAL INFORMATION

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

Carcinogen Status: See below

Titanium dioxide

IARC: Group 2B (Possibly Carcinogenic to Humans)

Crospovidone

IARC: Group 3 (Not Classifiable)

Povidone

IARC: Group 3 (Not Classifiable)

Talc (non-asbestiform)

IARC: Group 3 (Not Classifiable)

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)

Pantoprazole

Pseudokirchneriella subcapitata (Green Alga) OECD EC50 72 Hours 48 mg/L

Daphnia magna (Water Flea) OECD EC50 48 Hours >95 mg/L

Pimephales promelas (Fathead Minnow) OECD LC50 96 Hours >95 mg/L

Activated sludge OECD EC50 3 Hours > 1000 mg/L

Sodium lauryl sulfate

Oncorhynchus mykiss (Rainbow Trout) LC50 96 Hours 3.6 mg/L

Persistence and Degradability: No data available

Bio-accumulative Potential:

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

Pantoprazole

Predicted 7.4 Log P 2.05

Mobility in Soil: No data available

Material Name: Pantoprazole Sodium Delayed-Release Page 10 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

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

Crospovidone

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Not Listed

Ferric oxide yellow

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed
Present
Present
257-098-5

Methacrylic acid copolymer

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Not Listed

Not Listed

Microcrystalline cellulose

CERCLA/SARA 313 Emission reporting

Not Listed

California Proposition 65

Not Listed

Material Name: Pantoprazole Sodium Delayed-Release Page 11 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

15. REGULATORY INFORMATION

Inventory - United States TSCA - Sect. 8(b) Present
Australia (AICS): Present

Dangerous Substances:

EU EINECS/ELINCS List 232-674-9

Pantoprazole Sodium Sesquihydrate

CERCLA/SARA 313 Emission reporting

California Proposition 65

EU EINECS/ELINCS List

Not Listed

Not Listed

Polysorbate 80

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

EU EINECS/ELINCS List

Not Listed

Not Listed

Not Listed

Sodium lauryl sulfate

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Standard for the Uniform Scheduling

Not Listed

Not Listed

Not Listed

Present

Present

Schedule 6

for Drugs and Poisons:

EU EINECS/ELINCS List 205-788-1

Talc (non-asbestiform)

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Not Listed

Not Listed

Not Listed

Not Listed

Not Eisted

Not

Triethyl Citrate

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Not Listed

Not Listed

Present

201-070-7

Povidone

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

EU EINECS/ELINCS List

Not Listed

Not Listed

Hydroxypropyl methylcellulose

CERCLA/SARA 313 Emission reporting

Not Listed
California Proposition 65

Not Listed

D700400

Material Name: Pantoprazole Sodium Delayed-Release Page 12 of 12

Granules, for Suspension

Revision date: 19-Oct-2015 Version: 2.0

15. REGULATORY INFORMATION

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Standard for the Uniform Scheduling

Present
Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List Not Listed

Titanium dioxide

CERCLA/SARA 313 Emission reporting Not Listed

California Proposition 65 carcinogen initial date 9/2/11 airborne, unbound particles of

respirable size

Inventory - United States TSCA - Sect. 8(b)PresentAustralia (AICS):PresentEU EINECS/ELINCS List236-675-5

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: Safety data sheets for individual ingredients. Pfizer proprietary drug development information.

Publicly available toxicity information.

Reasons for Revision: Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking.

Updated Section 11 - Toxicology Information. Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on Ingredients. Updated Section 16 - Other

Information.

Revision date: 19-Oct-2015

Product Stewardship Hazard Communication
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

Prepared by: