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IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

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Material Name: Pramipexole Dihydrochloride Tablets

Trade Name: Mirapex; Mirapexin

Chemical Family: Mixture

Intended Use: Pharmaceutical product for the treatment of Parkinson's disease

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

Ingredient	CAS Number	EU EINECS List	%
Pramipexole Dichloride Monohydrate	104632-26-0	Not listed	0.2 - 0.5
Corn Starch	9005-25-8	232-679-6	*
Magnesium stearate	557-04-0	209-150-3	*
Silicon dioxide, colloidal NF	7631-86-9	231-545-4	*

Ingredient	CAS Number	EU EINECS List	%
Mannitol	69-65-8	200-711-8	*
Povidone	9003-39-8	Not listed	*

Additional Information: * Proprietary

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

safety.

3. HAZARDS IDENTIFICATION

Appearance: White tablets

Statement of Hazard: Non-hazardous in accordance with international standards for workplace safety.

Additional Hazard Information:

Short Term: Not a skin irritant , Not acutely toxic (based on components) . Ingestion may cause lowering of

blood pressure.

Long Term: Animal studies indicate that this material may cause adverse effects on the eyes.

Known Clinical Effects: Adverse effects most commonly reported in clinical use include hallucinations, drowsiness,

sleepiness, dizziness, sedation, and gastrointestinal disturbance.

EU Indication of danger: Not classified

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require the inclusion of all known hazards of the active substance or its intermediates regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your

This document has been prepared in accordance with standards for workplace safety, which

workplace.

4. FIRST AID MEASURES

Note:

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.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use carbon dioxide, dry chemical, or water spray.

Hazardous Combustion Products: Emits toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides and other

sulfur-containing compounds.

Fire Fighting Procedures: During all fire fighting activities, wear appropriate protective equipment, including self-

contained breathing apparatus.

Fire / Explosion Hazards: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Health and Safety Precautions: Personnel involved in clean-up should wear appropriate personal protective equipment (see

Section 8). Minimize exposure.

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.

Measures for Environmental

Protections:

Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to

avoid environmental release.

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

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General Handling: Ground and bond all bulk transfer equipment. If tablets or capsules are crushed and/or broken,

avoid breathing dust and avoid contact with eyes, skin, and clothing. When handling, use

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appropriate personal protective equipment (see Section 8).

Storage Conditions: Store at room temperature in properly labeled containers. Keep away from heat, sparks and

flames. Protect from light.

Storage Temperature: 25°C (77°F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Pramipexole Dichloride Monohydrate

Pfizer OEL TWA-8 Hr: 7 ug/m³

Corn Starch

OSHA - Final PELS - TWAs: = 15 mg/m³ TWA total

= $5 \text{ mg/m}^3 \text{ TWA}$ = $10 \text{ mg/m}^3 \text{ TWA}$

ACGIH Threshold Limit Value (TWA) = 10 mg/m³ TWA Australia TWA = 10 mg/m³ TWA

Magnesium stearate

ACGIH Threshold Limit Value (TWA) = 10 mg/m³ TWA except stearates of toxic metals

Australia TWA = 10 mg/m³ TWA

Silicon dioxide, colloidal NF

OSHA - Final PELs - Table Z-3 Mineral D: (80)/(% SiO2) mg/m³ TWA

= 20 mppcf TWA

Australia TWA = $2 \text{ mg/m}^3 \text{ TWA}$

The exposure limit(s) listed for solid components are only relevant if dust may be generated.

Analytical Method: Analytical method available for Pramipexole. Contact Pfizer Inc for further information.

Engineering Controls: Engineering controls should be used as the primary means to control exposures.

Personal Protective Equipment:

Hands: Not required for the normal use of this product. Wear protective gloves when working with

large quantities.

Eyes: Not required under normal conditions of use. Wear safety glasses or goggles if eye contact is

possible.

Skin: Not required for the normal use of this product. Wear protective clothing when working with

large quantities.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:TabletColor:WhiteMolecular Formula:MixtureMolecular Weight:Mixture

10. STABILITY AND REACTIVITY

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Material Name: Pramipexole Dihydrochloride Tablets

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Stability: Stable under normal conditions of use.

Conditions to Avoid:

Incompatible Materials:

None known

Not applicable

11. TOXICOLOGICAL INFORMATION

General Information: The following information is available for the individual ingredients.

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

Pramipexole Dichloride Monohydrate mg/kg

Rat Oral LD 50 >800 mg/kg

Mouse Oral Minimum Lethal Dose 1700 mg/kg

Rat Intravenous LD 50 ~210 mg/kg Mouse Intravenous LD 50 155 (M) mg/kg

Magnesium stearate

Rat Oral LD50 > 2000 mg/kg Rat Inhalation LC50 > 2000 mg/m³

Mannitol

Rat Oral LD 50 13500 mg/kg Mouse Oral LD 50 22 g/kg

Povidone

Rat Oral LD50 100 g/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)

Pramipexole Dichloride Monohydrate

Skin Irritation Rabbit Non-irritating

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

Pramipexole Dichloride Monohydrate

13 Week(s) Rat No route specified 25 mg/kg/day LOAEL Eyes

2 Year(s) Rat Oral 2 mg/kg/day LOAEL Eyes

2 Year(s) Rat Oral 8 mg/kg/day NOAEL No effects at maximum dose

2 Year(s) Mouse No route specified 10 mg/kg/day NOAEL No effects at maximum dose 12 Month(s) Non-human Primate Oral 0.1 mg/kg/day NOAEL No effects at maximum dose

Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

Pramipexole Dichloride Monohydrate

Reproductive & Fertility Rat 2.5 mg/kg LOAEL Fertility

Reproductive & Fertility Rat 1.5 mg/kg/day LOAEL Fetotoxicity

Embryo / Fetal Development Rabbit 10 mg/kg/day NOAEL No effects at maximum dose

Prenatal & Postnatal Development Rat 0.5 mg/kg/day LOAEL Neonatal toxicity

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

Pramipexole Dichloride Monohydrate

Bacterial Mutagenicity (Ames) Salmonella , E. coli Negative

Chromosome Aberration Chinese Hamster Ovary (CHO) cells Negative

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Micronucleus Not specified Negative

Mammalian Cell Mutagenicity HGPRT Negative

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

Pramipexole Dichloride Monohydrate

2 Year(s) Mouse No route specified 10 mg/kg/day NOAEL Not carcinogenic 2 Year(s) Rat No route specified 8 mg/kg/day NOAEL Not carcinogenic

Carcinogen Status: None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

See below

Povidone

IARC: Group 3

Silicon dioxide, colloidal NF

IARC: Group 3

12. ECOLOGICAL INFORMATION

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

avoided.

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

EU Indication of danger: Not classified

OSHA Label:

Non-hazardous in accordance with international standards for workplace safety.

Canada - WHMIS: Classifications

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WHMIS hazard class:

None required

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Pramipexole Dichloride Monohydrate

Standard for the Uniform Scheduling Schedule 4

for Drugs and Poisons:

Corn Starch

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

Australia (AICS): Present

EU EINECS List 232-679-6

Mannitol

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

Australia (AICS):

Present

EU EINECS List

200-711-8

Povidone

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

Magnesium stearate

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

Australia (AICS):

EU EINECS List

Present
209-150-3

Silicon dioxide, colloidal NF

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

Australia (AICS):

Present

EU EINECS List

231-545-4

16. OTHER INFORMATION

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

Identification. Updated Section 5 - Fire Fighting Measures. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 11 - Toxicology Information. Updated Section

15 - Regulatory Information.

Prepared by: Toxicology and Hazard Communication

Pfizer Global Environment, Health, and Safety

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End of Safety Data Sheet