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

**Product Identifier** 

Material Name: Methylprednisolone Tablets

Trade Name: MEDROL

Chemical Family: Corticosteroid hormone

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Pharmaceutical product used as anti-inflammatory

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:** 

Animal Health Division (office hours): +44 (0)1737 331333

#### 2. HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

**GHS - Classification** 

Reproductive Toxicity: Category 1A

Specific target organ systemic toxicity (repeated exposure): Category 2

**EU Classification:** 

EU Indication of danger: Toxic to reproduction: Category 1

Harmful

EU Risk Phrases:

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R61 - May cause harm to the unborn child.

**Label Elements** 

Signal Word: Danger

Hazard Statements: H360 - May damage fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure: blood and

blood forming organs, adrenal gland

Precautionary Statements: P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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

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Other Hazards
Australian Hazard Classification
(NOHSC):

No data available

Hazardous Substance. Non-Dangerous Goods.

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

### Hazardous

Ingredient	CAS Number	EU	EU Classification	GHS	%
3		EINECS/ELINCS		Classification	
		List			
Methylprednisolone	83-43-2	201-476-4	Xn;R48/22	Repr. 1A (H360)	2, 4, 8, 16 or
			Repr.Cat.1;R61	STOT RE 2 (H373)	32mg***
Corn Starch	9005-25-8	232-679-6	Not Listed	Not Listed	*
Sucrose	57-50-1	200-334-9	Not Listed	Not Listed	*
Calcium stearate	1592-23-0	216-472-8	Not Listed	Not Listed	*
Mineral oil	8012-95-1	232-384-2	Not Listed	Not Listed	*

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Sorbic acid	110-44-1	203-768-7	Not Listed	Not Listed	*
Lactose	63-42-3	200-559-2	Not Listed	Not Listed	*

Additional Information: \* Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety. 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 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 eye(s) immediately with plenty of water. If irritation occurs or persists, get medical

attention.

**Skin Contact:** Wash skin with soap and water. If irritation occurs or persists, get 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.

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**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

**Exposure:** Identification and/or Section 11 - Toxicological Information.

Medical Conditions None known

Aggravated by Exposure:

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** May include oxides of carbon.

**Products:** 

Fire / Explosion Hazards: Not applicable

**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. If tablets or capsules are crushed and/or broken, avoid breathing dust and 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

**Storage Conditions:** Store as directed by product packaging.

Specific end use(s): Pharmaceutical product

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Control Parameters**

 $3 \text{ mg/m}^3$ 

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# 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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Methy	lprednisolone	
	prodriiooioiio	

Pfizer OEL TWA-8 Hr: 4 μg/m³, Skin

#### **Corn Starch**

10 mg/m<sup>3</sup> **ACGIH Threshold Limit Value (TWA)** 10 mg/m<sup>3</sup> **Australia TWA Belgium OEL - TWA** 10 mg/m<sup>3</sup> 10.0 mg/m<sup>3</sup> **Bulgaria OEL - TWA** 4.0 mg/m<sup>3</sup> Czech Republic OEL - TWA 10 mg/m<sup>3</sup> **Greece OEL - TWA**  $5 \text{ mg/m}^3$ Ireland OEL - TWAs 10 mg/m<sup>3</sup>  $4 \text{ mg/m}^3$ **OSHA - Final PELS - TWAs:** 15 mg/m<sup>3</sup> Portugal OEL - TWA 10 mg/m<sup>3</sup> Slovakia OEL - TWA  $4 \text{ mg/m}^3$ 10 mg/m<sup>3</sup> Spain OEL - TWA

#### Sucrose

**Switzerland OEL -TWAs** 

**ACGIH Threshold Limit Value (TWA)** 10 mg/m<sup>3</sup> 10 mg/m<sup>3</sup> **Australia TWA Belgium OEL - TWA** 10 mg/m<sup>3</sup> **Bulgaria OEL - TWA** 10.0 mg/m<sup>3</sup> 10 mg/m<sup>3</sup> Estonia OEL - TWA France OEL - TWA 10 mg/m<sup>3</sup> **Ireland OEL - TWAs** 10 mg/m<sup>3</sup> 5 mg/m<sup>3</sup> Latvia OEL - TWA Lithuania OEL - TWA 10 mg/m<sup>3</sup> 15 mg/m<sup>3</sup> **OSHA - Final PELS - TWAs:** 10 mg/m<sup>3</sup> Portugal OEL - TWA Slovakia OEL - TWA 6 mg/m<sup>3</sup> Spain OEL - TWA 10 mg/m<sup>3</sup>

### **Calcium stearate**

ACGIH Threshold Limit Value (TWA) 10 mg/m³
Lithuania OEL - TWA 5 mg/m³
Sweden OEL - TWAs 5 mg/m³

# Mineral oil

**ACGIH Threshold Limit Value (TWA)** 5 mg/m<sup>3</sup> 5 mg/m<sup>3</sup> **Australia TWA** 5 mg/m<sup>3</sup> **Belgium OEL - TWA Bulgaria OEL - TWA** 5.0 mg/m<sup>3</sup> 5 mg/m<sup>3</sup> Czech Republic OEL - TWA 1 mg/m<sup>3</sup> **Denmark OEL - TWA Finland OEL - TWA** 5 mg/m<sup>3</sup> **Greece OEL - TWA** 5 mg/m<sup>3</sup> Lithuania OEL - TWA  $1 \text{ mg/m}^3$ 5 mg/m<sup>3</sup> **Netherlands OEL - TWA** 

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# 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**OSHA - Final PELS - TWAs:** 5 mg/m<sup>3</sup> Poland OEL - TWA 5 mg/m<sup>3</sup> 5 mg/m<sup>3</sup> Portugal OEL - TWA 5 mg/m<sup>3</sup> Romania OEL - TWA 5 ppm Slovakia OEL - TWA  $1 \text{ mg/m}^3$ 5 mg/m<sup>3</sup>

Spain OEL - TWA 5 ma/m<sup>3</sup> **Sweden OEL - TWAs**  $1 \text{ mg/m}^3$ 5 mg/m<sup>3</sup> Vietnam OEL - TWAs

**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** Refer to applicable national standards and regulations in the selection and use of personal

protective equipment (PPE). **Equipment:** 

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

processing operations.

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

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: Tablets** Color: Various

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

Molecular Formula: Mixture **Molecular Weight:** Mixture

**Solvent Solubility:** No data available No data available Water Solubility: No data available. pH: **Melting/Freezing Point (°C):** No data available No data available. **Boiling Point (°C):** Partition Coefficient: (Method, pH, Endpoint, Value)

**Calcium stearate** No data available

Sucrose

No data available Corn Starch No data available

Lactose

No data available Sorbic acid No data available Mineral oil

No data available Methylprednisolone

Predicted 7.4 Log D 1.99

**Decomposition Temperature (°C):** No data available.

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No data available **Evaporation Rate (Gram/s):** Vapor Pressure (kPa): No data available Vapor Density (q/ml): No data available **Relative Density:** No data available Viscosity: No data available

Flammablity:

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

No data available Reactivity:

**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 the individual

ingredients.

May be absorbed through the skin and cause systemic effects. **Short Term:** 

Long Term: Repeat-dose studies in animals have shown a potential to cause adverse effects on blood and

blood forming organs. May cause allergic reactions in susceptible individuals following

repeated contact with this material.

**Known Clinical Effects:** Adverse clinical reactions include the development of hypersensitivity and/or irritation leading

to rashes, itching, and burning. Clinical use has resulted in hormonal alterations.

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

**Sucrose** 

Rat Oral LD50 29.7 g/kg

Sorbic acid

LD50 7360 mg/kg Rat Oral Oral LD50 3200mg/kg Mouse

Methylprednisolone

Rat Oral LD 50 > 2000 mg/kg Mouse Oral LD 50 450mg/kg

Intraperitoneal LD 50 Rat 1000mg/kg Mouse Intraperitoneal LD 50 1409mg/kg Rat Subcutaneous LD 50 >3000mg/kg

A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable **Acute Toxicity Comments:** 

at the highest dose used in the test.

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## 11. TOXICOLOGICAL INFORMATION

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

#### Mineral oil

Eye Irritation Rabbit Moderate Skin Irritation Rabbit Mild

# Methylprednisolone

Skin Irritation Rabbit No effect Eye Irritation Rabbit No effect

Skin Sensitization - GPMT Guinea Pig No effect

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

### Methylprednisolone

42 Day(s) Dog Oral 167 μg/kg/day LOAEL Adrenal gland

6 Week(s) Rat Subcutaneous 500 μg/kg/day LOAEL None identified

14 Week(s) Rat Subcutaneous 0.4  $\mu$ g/kg/day NOAEL Blood forming organs, Adrenal gland 52 Week(s) Rat Subcutaneous 4  $\mu$ g/kg/day NOAEL Blood forming organs Adrenal gland

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

### Methylprednisolone

Reproductive & Fertility Rat Subcutaneous 0.004 mg/kg/day NOAEL Paternal toxicity Reproductive & Fertility Rat Subcutaneous 0.02 mg/kg/day LOAEL Fetotoxicity

Embryo / Fetal Development Rat Subcutaneous 1.0 mg/kg/day LOAEL Fetotoxicity, Teratogenic

Embryo / Fetal Development Mouse Intramuscular 330 mg/kg/day LOAEL Teratogenic Embryo / Fetal Development Rabbit Intramuscular 0.1 mg/kg/day LOAEL Teratogenic

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

### Sucrose

Bacterial Mutagenicity (Ames) Salmonella Negative

### Methylprednisolone

Bacterial Mutagenicity (Ames) Salmonella Negative
Unscheduled DNA Synthesis Rat Hepatocyte Negative

Mammalian Cell Mutagenicity Chinese Hamster Ovary (CHO) cells Negative

Direct DNA Interaction Negative

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

## 12. ECOLOGICAL INFORMATION

**Environmental Overview:** Environmental properties have not been thoroughly investigated. Releases to the environment

should be avoided.

**Toxicity:** No data available

Persistence and Degradability: No data available

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Bio-accumulative Potential: Methylprednisolone

Predicted 7.4 Log D 1.99

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

Canada - WHMIS: Classifications
WHMIS hazard class:
D2a very toxic materials



Methylprednisolone

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

Present

Present

Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List 201-476-4

232-679-6

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## 15. REGULATORY INFORMATION

#### Corn Starch

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **REACH - Annex IV - Exemptions from the** Present obligations of Register:

Sucrose

**CERCLA/SARA 313 Emission reporting** Not Listed California Proposition 65 Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **REACH - Annex IV - Exemptions from the** Present

obligations of Register:

**EU EINECS/ELINCS List** 

**EU EINECS/ELINCS List** 200-334-9

Calcium stearate

Not Listed **CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Present Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): **EU EINECS/ELINCS List** 216-472-8

Mineral oil

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **EU EINECS/ELINCS List** 232-384-2

Sorbic acid

Not Listed **CERCLA/SARA 313 Emission reporting** Not Listed California Proposition 65 Present Inventory - United States TSCA - Sect. 8(b) Australia (AICS): Present **EU EINECS/ELINCS List** 203-768-7

Lactose

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **REACH - Annex IV - Exemptions from the** Present obligations of Register: 200-559-2 **EU EINECS/ELINCS List** 

# 16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3

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Reproductive toxicity-Cat.1A; H360 - May damage fertility or the unborn child Specific target organ toxicity, single exposure-Cat.2; H373 - May cause damage to organs through prolonged or repeated exposure

Xn - Harmful

Toxic to reproduction: Category 1

R61 - May cause harm to the unborn child.

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

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

**Reasons for Revision:** Updated Section 2 - Hazard Identification.

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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** 

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