

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name Penicillin G potassium for injection

Product Code(s) 150

Trade Name: PFIZERPEN Chemical Family: Penicillin

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Pharmaceutical product used as antibiotic agent

1.3. Details of the supplier of the safety data sheet

Pfizer Inc
66 Hudson Boulevard East
New York, New York 10001
1-800-879-3477
Pfizer Ltd
Ramsgate Road
Sandwich, Kent
CT13 9NJ
United Kingdom

+00 44 (0)1304 616161

E-mail address pfizer-MSDS@pfizer.com

1.4. Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300 International Chemtrec (24 hours):+1-703-527-3887

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Respiratory sensitizationCategory 1Skin sensitizationCategory 1

OSHA Classification

Hazards not otherwise classified (HNOC)

Not applicable

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

Not applicable

2.2. Label elements



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Signal word Danger

Hazard statements H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

1272/2008)

P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves/protective clothing/eye protection/face protection

P284 - In case of inadequate ventilation wear respiratory protection

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or

doctor/physician

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse

P501 - Dispose of contents/container in accordance with local, regional, national, and

international regulations as applicable

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

2.3. Other hazards

Other hazards An Occupational Exposure Value has been established for one or more of the ingredients

(see Section 8).

PBT & vPvB The product does not contain any substance(s) classified as PBT or vPvB.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

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

> require the inclusion of all known hazards of the product or its ingredients 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 workplace.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substances Not applicable

3.2 Mixtures

Hazardous

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Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Penicillin G potassium (CAS #: 113-98-4)	*		204-038-0	Resp. Sens.1 (H334) Skin Sens.1 (H317)	Not classified	No data available	No data available
Citric acid (CAS #: 77-92-9)	**		201-069-1 (607-750-00-3)	Eye Irrit. 2A (H319)SE 3 (H335)	Not classified	No data available	No data available

NonHazardous

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Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Sodium citrate (CAS #: 68-04-2)	**	-	200-675-3	Not classified	Not classified	No data available	No data available

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapor - mg/L	hour - gas - ppm
Penicillin G potassium 113-98-4	8900	No data available	No data available	No data available	No data available
Citric acid 77-92-9	5400	>2000	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

Additional information

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. Non-hazardous ingredients provided for completeness.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Remove to fresh air. Seek immediate medical attention/advice.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

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.

4.2. Most important symptoms and effects, both acute and delayed

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

effects Identification and/or Section 11 - Toxicological Information.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians None.

^{**} to adjust pH

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Section 5: FIRE-FIGHTING MEASURES

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5.1. Extinguishing media

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Suitable Extinguishing Media Dry chemical, CO2 or water spray.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

Fine particles (such as dust and mists) may fuel fires/explosions.

Hazardous combustion products Emits toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides and

other sulfur-containing compounds.

Explosion data

Sensitivity to mechanical impact No information available. Sensitivity to static discharge No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Personnel involved in clean-up should wear appropriate personal protective equipment (see

Section 8). Minimize exposure.

6.2. Environmental precautions

Environmental precautions Place waste in an appropriately labeled, sealed container for disposal. Care should be

taken to avoid environmental release.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Contain the source of the spill or leak. Collect spilled material by a method that controls dust

generation. Avoid use of a filtered vacuum to clean spills of dry solids. Clean contaminated

surface thoroughly.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Minimize dust generation and accumulation. Avoid inhalation and contact with skin, eye, and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash hands and any exposed skin after removal of PPE. 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

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be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Handle in accordance with good industrial hygiene and safety practice. General hygiene considerations

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Store as directed by product packaging.

7.3. Specific end use(s)

Specific use(s) Pharmaceutical drug product.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

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

Citric acid

Czech Republic

Germany DFG TWA-MAK: 2 mg/m³; I(2);inhalable fraction

Peak: 4 mg/m³; respirable fraction

Germany TRGS TWA-AGW; 2 mg/m³ (exposure factor 2); inhalable fraction

Russia MAC: 1 mg/m³

Switzerland TWA-MAK: 2 mg/m3; inhalable dust

STEL-KZGW: 4 mg/m3; inhalable dust

Pfizer Occupational Exposure Band

(OEB) Statement:

The purpose of the Occupational Exposure Band (OEB) classification system is to separate substances into different Hazard categories when the available data are sufficient to do so, but inadequate to establish an Occupational Exposure Limit (OEL). The OEB given is based upon an analysis of all currently available data; as such, this value may be subject to revision when new information becomes available.

8.2. 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

Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE). Contact your safety and health professional or safety equipment supplier for assistance in selecting the correct protective clothing/equipment based on an assessment of the workplace conditions, other chemicals used or present in

the workplace and specific operational processes.

Wear safety glasses or goggles if eye contact is possible. (Eye protection must meet the Eye/face protection

standards in accordance with EN166, ANSI Z87.1 or international equivalent.).

Impervious gloves (e.g. Nitrile, etc.) are recommended if skin contact with drug product is Hand protection

possible and for bulk processing operations. (Protective gloves must meet the standards in

accordance with EN374, ASTM F1001 or international equivalent.).

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Skin and body protection Impervious protective clothing is recommended if skin contact with drug product is possible

and for bulk processing operations. (Protective clothing must meet the standards in

accordance with EN13982, ANSI 103 or international equivalent.).

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.).

Thermal hazards No information available.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Crystalline powder
Physical state Powder

Color White Odor Odorless.

Odor threshold No information available

<u>Property</u> <u>Values</u>

Melting point / freezing pointNo data availableBoiling point or initial boiling point and boiling rangeNo data availableFlammability (solid, gas)No data available

Lower and upper explosion limit/flammability limit

Lower explosion limit
Upper explosion limit
No data available
No data available
Flash point
No data available

Autoignition temperature No data available

Decomposition temperature

SADT (°C)

PH

No data available

Dynamic viscosity
No data available
Solubility
No data available
Vapor pressure
No data available

Liquid Density
No data available
Vapor density
No data available
Particle characteristics

Particle Size No information available Particle Size Distribution No information available

Penicillin G potassium

1.83

9.2. Other information

Molecular formula Mixture
Molecular weight Mixture

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9.2.1. Information with regard to physical hazard classes

No information available

9.2.2. Other safety characteristics

No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact No information available. **Sensitivity to static discharge** No information available.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No information available.

10.4. Conditions to avoid

Conditions to avoid Fine particles (such as dust and mists) may fuel fires/explosions.

10.5. Incompatible materials

Incompatible materialsAs a precautionary measure, keep away from strong oxidizers.

10.6. Hazardous decomposition products

Hazardous decomposition products No data available.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

General Information: The information included in this section describes the potential hazards of various forms of

the active ingredient. The remaining information describes the potential hazards of the

individual ingredients.

Short term Individuals who are allergic to penicillin antibiotics could have allergic reaction, possibly

severe (anaphylactic). If an allergic reaction occurs, the worker should be removed to the

nearest emergency room and the appropriate therapy instituted.

Known Clinical Effects: May cause effects similar to those seen in clinical use including transient diarrhea, nausea

and abdominal pain. Individuals who are sensitive to beta lactam antibiotics, both penicillins and cephalosporins, may experience contact or systemic hypersensitivity and anaphylaxis

upon exposure to this drug.

Acute toxicity Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation
Skin corrosion/irritation
Respiratory or skin sensitization

Based on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.
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STOT - single exposure
STOT - repeated exposure
Reproductive toxicity
Based on available data, the classification criteria are not met.
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Acute Toxicity: (Species, Route, End Point, Dose)

Penicillin G potassium

Mouse Oral LD50 6257 mg/kg

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Rat Oral LD50 8900 mg/kg Rabbit Oral LD50 5848 mg/kg

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Citric acid

Mouse Oral LD50 5400 mg/kg

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Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Penicillin G potassium	= 8900 mg/kg (Rat)	-	-
Citric acid	= 3 g/kg (Rat)	> 2000 mg/kg (Rat)	-

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

Citric acid

Eye Irritation Rabbit Severe Skin Irritation Rabbit Mild

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

Penicillin V Potassium

14 Day(s) Rat Oral 2400 mg/kg/day NOAEL None identified

14 Day(s) Mouse Oral 2400 mg/kg/day NOAEL None identified

13 Week(s) Rat Oral 750 mg/kg/day LOEL Gastrointestinal system

13 Week(s) Mouse Oral 250 mg/kg/day LOEL Gastrointestinal system

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

Penicillin V Potassium

In Vitro Bacterial Mutagenicity (Ames) Negative

In Vitro Cell Transformation Assay Mouse Lymphoma Positive with activation

Sister Chromatid Exchange Chinese Hamster Ovary (CHO) cells Positive without activation Sister Chromatid Exchange Chinese Hamster Ovary (CHO) cells Negative with activation

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

Penicillin V Potassium

2 Year(s) Rat Oral 1000 mg/kg/day NOEL Not carcinogenic

2 Year(s) Mouse Oral 1000 mg/kg/day NOEL Not carcinogenic

Carcinogenicity None of the components of this formulation are listed as a carcinogen by IARC, NTP or

OSHA.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties Based on available data, the classification criteria are not met.

11.2.2. Other information

Other adverse effects No information available.

Section 12: ECOLOGICAL INFORMATION

The use and/or disposal of this material, its metabolites and degradation products is not **Environmental Overview:**

expected to cause adverse effects upon animals, plants, humans, other organisms, or the

environment.

12.1. Toxicity

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

Penicillin G potassium

Daphnia magna (Water Flea) LC50 48 hours > 1000 mg/L

Nitzschia fonticola (Diatom) LC50 630 2000 mg/L

Aquatic Toxicity Comments: A greater than symbol (>) indicates that aquatic toxicity was not observed at the maximum

dose tested.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Penicillin G potassium

1.83

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment Based on available data, the classification criteria are not met.

Chemical name	PBT and vPvB assessment	
Penicillin V Potassium	Not PBT/vPvB	
Sodium citrate	Not PBT/vPvB PBT assessment does not apply	
Citric acid	Not PBT/vPvB	

12.6. Endocrine disrupting properties

Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. Other adverse effects

Other adverse effects No information available.

PMT or vPvM propertiesBased on available data, the classification criteria are not met.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products

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 wastewater 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.

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Section 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.

UN number:
UN proper shipping name:
Not applicable
Transport hazard class(es):
Packing group:
Not applicable
Not applicable
Environmental Hazard(s):
Not applicable

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Penicillin G potassium

CERCLA/SARA Section 313 de minimus % Not Listed
California Proposition 65 Not Listed
TSCA Present
EINECS 204-038-0

Sodium citrate

CERCLA/SARA Section 313 de minimus % Not Listed
California Proposition 65 Not Listed
TSCA Present
EINECS 200-675-3
AICS Present
Standard for Uniform Scheduling of Medicines and Schedule 5

Poisons (SUSMP)

Citric acid

CERCLA/SARA Section 313 de minimus % Not Listed California Proposition 65 Not Listed TSCA Present EINECS 201-069-1 AICS

National regulations

Germany

Chemical Prohibition Ordinance (ChemVerbotsV)

Not applicable

TRGS 905 Not applicable

Switzerland

Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Not applicable Storage of Hazardous Material

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WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Major Accidents Ordinance SR 814.012 Not applicable Not applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name		Restricted substance per REACH	Substance subject to authorization per	
		Annex XVII	REACH Annex XIV	
	Citric acid	75	-	
	77-92-9			

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) Regulation (EU) 2024/590

Not applicable.

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Citric acid	Product-type 2: Disinfectants and algaecides not intended
77-92-9	for direct application to humans or animals Product-type 6:
	Preservatives for products during storage

Explosives Precursors Marketing and Use (2019/1148)

Not applicable

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing Chemicals Inventory

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H317 - May cause an allergic skin reaction

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

Reason for revision Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on

Ingredients. Updated Section 11 - Toxicology Information. Updated Section 12 - Ecological

Information.

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Prepared By Pfizer Global Environment, Health, and Safety

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