

MATERIAL SAFETY DATA SHEET

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Version 1.4

Section 1 - Product and Company Information

Product Name PENICILLIN-G POTASSIUM CELL CULTURE
TESTED
Product Number P7794
Brand SIGMA
Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BENZYL PENICILLIN POTASSIUM SALT*	113-98-4	No

Formula C₁₆H₁₇KN₂O₄S
Synonyms Benzylpenicillinic acid potassium salt *
Benzylpenicillin potassium * Benzylpenicillin
potassium salt * Cristapen * Eskacillin * Falapen
* Forpen * Hipercilina * Hyasorb * Hylenta *
Megacillin tablets * Monopen * Notaral *
Novocillin vet. * Penicillin G potassium * Pentid
* Pentids * Pfizerpen * Potassium
benzylpenicillin * Potassium benzylpenicillinate
* Potassium benzylpenicillin G * Potassium
penicillin G * Potassium salt of benzylpenicillin
* Qidpen G * Scotcil * SK-Penicillin G *
Sugracillin * Tabilin
RTECS Number: XH9700000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful.

May cause sensitization by inhalation and skin contact.

HMIS RATING

HEALTH: 3*

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance	Color: White Form: Powder	
Property	Value	At Temperature or Pressure
Molecular Weight	372.5 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	Degree of Rotation: 20 g/l Solvent: H2O +348 - +290 (+/-4)	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: glycerol alcohol, Acids, Heavy metal salts, Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

SENSITIZATION

Respiratory: May cause allergic respiratory reaction.

Skin: May cause allergic skin reaction.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral

Rat

8900 mg/kg

LD50

Intraperitoneal

Rat

>2 GM/KG

LD50

Remarks: Lungs, Thorax, or Respiration:Other changes.

Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Somnolence (general depressed activity).

Subcutaneous

Rat

11250 MG/KG

LD50

Remarks: Gastrointestinal:Hypermotility, diarrhea.

Intravenous

Rat

243 MG/KG

LD50

Remarks: Lungs, Thorax, or Respiration:Other changes.

Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Somnolence (general depressed activity).

Intramuscular

Rat

>2 GM/KG

LD50

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Convulsions or effect on seizure threshold. Lungs,
Thorax, or Respiration:Other changes.

Oral
Mouse
6257 mg/kg
LD50
Remarks: Behavioral:Excitement.

Intraperitoneal
Mouse
>2 GM/KG
LD50
Remarks: Lungs, Thorax, or Respiration:Other changes.
Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Somnolence (general depressed activity).

Intravenous
Mouse
240 MG/KG
LD50
Remarks: Lungs, Thorax, or Respiration:Other changes.
Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Somnolence (general depressed activity).

Intramuscular
Mouse
>2 GM/KG
LD50
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Convulsions or effect on seizure threshold. Lungs,
Thorax, or Respiration:Other changes.

Oral
Rabbit
5848 mg/kg
LD50
Remarks: Behavioral:Hallucinations, distorted perceptions.
Lungs, Thorax, or Respiration:Respiratory depression.
Nutritional and Gross Metabolic:Changes in:Body temperature
decrease.

Oral
Guinea pig
382 mg/kg
LD50
Remarks: Gastrointestinal:Ulceration or bleeding from stomach.
Lungs, Thorax, or Respiration:Dyspnea. Behavioral:Convulsions or
effect on seizure threshold.

Intraperitoneal
Guinea pig
374 MG/KG
LD50
Remarks: Lungs, Thorax, or Respiration:Other changes.
Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Somnolence (general depressed activity).

Intravenous
Guinea pig
303 MG/KG
LD50

Intramuscular
Guinea pig
1180 MG/KG
LD50

Remarks: Lungs, Thorax, or Respiration:Other changes.
Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Somnolence (general depressed activity).

CHRONIC EXPOSURE - MUTAGEN

Species: Rat
Route: Unreported
Dose: 200 MG/KG
Exposure Time: 8D
Mutation test: sperm

Mutation test: Histidine reversion (Ames)

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn
Indication of Danger: Harmful.
R: 42/43
Risk Statements: May cause sensitization by inhalation and skin contact.
S: 36/37
Safety Statements: Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.
Risk Statements: May cause sensitization by inhalation and skin contact.
Safety Statements: Wear suitable protective clothing and gloves.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

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

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.