

## SAFETY DATA SHEETS

**This SDS packet was issued with item:**

078470893

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

078391715 078399202



## PRODUCT SAFETY DATA SHEET

### PEN AQUEOUS

#### 1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF COMPANY / UNDERTAKING

Product Name	Pen Aqueous
Manufacturer	Norbrook Laboratories Ltd, Station Works, Newry, Co.Down, N.Ireland, BT35 6JP.
Supplier	Norbrook, Inc. 9733 Loiret Blvd Lenexa, KS 66219 Phone: 913 599 5777 Fax: 913 599 5766

#### 2. HAZARDS IDENTIFICATION

Physical and Chemical Hazards	:	Not classified as dangerous under EEC Directives 67/548/EEC, 88/379/EEC or 99/45/EC.
Environmental Hazards	:	None known
Adverse Human Health Effects	:	Penicillins and cephalosporins may cause hypersensitivity following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.

Do not handle this product if you know you are sensitised, or if you have been advised not to work with such preparations. Handle this product with great care to avoid exposure taking all recommended precautions. If you develop symptoms following exposure, such as a skin rash, you should seek medical advice and show the doctor this warning. Swelling of the face, lips or eyes or difficult breathing are more serious symptoms and require urgent medical attention.

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Preparation	:	Preparation
Active Ingredients	:	Penicillin G Procaine
Description	:	Antibiotic
Chemical Family	:	Penicillins

#### 4. FIRST AID MEASURES

Inhalation	:	Remove to fresh air. If any signs or symptoms occur or persist seek medical advice.
Skin Contact	:	Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse.

Eyes Contact	:	Immediately flush eyes with copious amounts of water for at least 15 minutes. If irritation persists, seek medical attention.
Ingestion	:	Do not induce vomiting. Seek medical attention.

## 5. FIRE FIGHTING MEASURES

Extinguishing media:	Use carbon dioxide, dry chemical or alcohol-resistant foam spray extinguishers. Use water spray to cool fire-exposed containers. A fine water mist may be used to smother or to disperse vapours.
Fire and explosion hazards:	None.

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	Provide good ventilation. Prevent skin and eye contact.
Environmental Precautions	:	Keep away from drains, surface-water, ground-water and soil.
Method for Clean-up	:	Absorb small spills on spill pillows, sand, sawdust or other suitable absorbing material.

## 7. HANDLING AND STORAGE

Handling	:	Avoid contact with eyes, skin or clothing. Do not breathe vapours or mist. Do not ingest. Do not smoke or eat while handling the product. Wash thoroughly after handling. The containers should be stored in their original boxes when not in use.
Storage	:	Store in closed containers in a cool, dry, well-ventilated area, between 2° and 8°C and away from oxidisers, heat, sparks and open flame. Protect containers from physical damage and light.  Keep container closed when not in use. Do not transfer contents to unlabelled containers. Use only with adequate ventilation. Keep out of reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component - Occupational Exposure Standard

Penicillin G Procaine

Not Established

For pure penicillin G procaine :

LD50 ( Oral, mouse )	2300 mg/kg
LD50 ( Oral, rat )	> 5000 mg/kg

Protective Equipment	:	Wear vinyl, nitrile or rubber gloves, a waterproof bib-apron and suitable eye protection when applying the product.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Suspension
Colour	:	White to off-white
Odour	:	None.

## 10. STABILITY AND REACTIVITY

Stability	:	Stable under normal temperatures and pressures.
Conditions to avoid	:	None known
Materials to avoid	:	None known

## 11. TOXICOLOGICAL INFORMATION

### Exposure Effects ( Acute )

Eye Contact	:	Direct contact of the solution with eyes can cause irritation.
Skin Contact	:	Prolonged or repeated contact with Pen Aqueous may cause irritation and/or drying and cracking of the skin.
Inhalation	:	None known.
Ingestion	:	Oral toxicity of the Pen Aqueous is low.

### Exposure Effects ( Chronic )

Unknown for the product mixture. When this product is used according to the directions, prolonged exposure of man is not expected. Both its mutagenicity and its teratogenicity are not known.

## 12. ECOLOGICAL INFORMATION

Data on the ecological implications for Pen Aqueous is not yet available.

## 13. DISPOSAL CONSIDERATIONS

Product/Residues	:	Do not discharge the product material into surface or waste water. For disposal, use an incinerator licensed for chemical waste.
Package	:	Dispose of waste containers using regular disposal methods in accordance with local and national environmental regulations.

## 14. TRANSPORT INFORMATION

### Land, Sea & Air Transport

ADR/RID, IMO/IMDG, IATA/ICAO, UN No. : Not applicable

## 15. REGULATORY INFORMATION

Labelling Information	:	None
Safety phrases	:	S2 Keep out of reach of children
	:	S7 Keep container tightly closed

## 16. OTHER INFORMATION

### For Animal Treatment Only

ANADA 065-010, approved by FDA

Revision Date : 23/07/07  
Revision No : 04

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Printing Date : 21/12/2010

Suppliers data sheets and various chemicals and pharmaceuticals databases were used to compile this sheet.

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## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.0 Revision Date 23.02.2013

Print Date 07.10.2016

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1 Product identifiers

Product name : Penicillin G potassium salt

Product Number : PENK

Brand : Sigma

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 113-98-4

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

Identified uses : Laboratory chemicals, Manufacture of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

## SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture

## Classification according to Regulation (EC) No 1272/2008

Skin sensitisation (Category 1), H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

## Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful R42/43

For the full text of the R-phrases mentioned in this Section, see Section 16.

## 2.2 Label elements

## Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word : Warning

Hazard statement(s)  
H317 : May cause an allergic skin reaction.

Precautionary statement(s)  
P280 : Wear protective gloves.

Supplemental Hazard  
Statements : none

## 2.3 Other hazards - none

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms	:	Benzylpenicillinpotassium salt
Formula	:	C <sub>16</sub> H <sub>17</sub> KN <sub>2</sub> O <sub>4</sub> S
Molecular Weight	:	372,48 g/mol
CAS-No.	:	113-98-4
EC-No.	:	204-038-0

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>Potassium [2S-(2<math>\alpha</math>,5<math>\alpha</math>,6<math>\beta</math>)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate</b>		
	Skin Sens. 1; H317	-

#### Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
<b>Potassium [2S-(2<math>\alpha</math>,5<math>\alpha</math>,6<math>\beta</math>)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate</b>		
	Xn, R42/43	-

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

no data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Potassium oxides

#### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 5.4 Further information

no data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.  
For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Handle and store under inert gas.

### 7.3 Specific end use(s)

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Components with workplace control parameters**

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm



Break through time: 480 min  
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,  
test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Do not let product enter drains.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |   |                               |
|---|-------------------------------|
| a) Appearance                                   | Form: powder<br>Colour: white |
| b) Odour  | no data available             |
| c) Odour Threshold                              | no data available             |
| d) pH   | no data available             |
| e) Melting point/freezing point                 | no data available             |
| f) Initial boiling point and boiling range      | no data available             |
| g) Flash point                                  | no data available             |
| h) Evaporation rate                             | no data available             |
| i) Flammability (solid, gas)                    | no data available             |
| j) Upper/lower flammability or explosive limits | no data available             |
| k) Vapour pressure                              | no data available             |
| l) Vapour density                               | no data available             |
| m) Relative density                             | no data available             |
| n) Water solubility                             | no data available             |
| o) Partition coefficient: n-octanol/water       | no data available             |
| p) Auto-ignition temperature                    | no data available             |
| q) Decomposition temperature                    | no data available             |
| r) Viscosity                                    | no data available             |
| s) Explosive properties                         | no data available             |

t) Oxidizing properties      no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

acids, Heavy metal salts, Oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 8.900 mg/kg

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitisation

#### Germ cell mutagenicity

Histidine reversion (Ames)

rat

sperm

#### Carcinogenicity

IARC:      No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

no data available

#### Specific target organ toxicity - single exposure

no data available

#### Specific target organ toxicity - repeated exposure

no data available

#### Aspiration hazard

no data available

#### Additional Information

RTECS: XH9700000

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

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**SECTION 12: Ecological information****12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

no data available

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID: -

IMDG: -

IATA: -

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

**14.4 Packaging group**

ADR/RID: -

IMDG: -

IATA: -

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

no data available

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**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3.**

H317

May cause an allergic skin reaction.

Skin Sens.                      Skin sensitisation

**Full text of R-phrases referred to under sections 2 and 3**

Xn                                  Harmful  
R42/43                      May cause sensitisation by inhalation and skin contact.

**Further information**

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