

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifier**

**Product name:** Penicillin G Potassium USP  
**Product code:** POTPEN-WS-347  
**Synonym(s):** Benzylpenicillin potassium salt; Benzylpenicillin potassium; Benzylpenicillinic acid potassium salt

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

**General use:** Veterinary/Animal antibiotic  
**Uses advised against:** Not for human use

**1.3 Details of the supplier and of the safety data sheet**

<b>Manufactured by</b>	<b>Manufactured for</b>
G. C. Hanford Mfg. Co.	Quo Vademus, LLC
304 Oneida Street	277 Faison McGowan Road
Syracuse, NY 13201 USA	Kenansville, NC 28349 USA
+1-315-476-7418	+1-910-296-0302

**1.4 Emergency telephone number**

In the continental USA call CHEMTREC: +1-800-424-9300 (24 hours)  
 Outside the continental USA call CHEMTREC: +1-703-527-3887 (24 hours)

**SECTION 2 - HAZARDS IDENTIFICATION**

**2.1 Classification of substance or mixture**

**Product definition:** Substance  
**Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008**  
 Skin Sensitization - Category 1 [H317]  
 Respiratory Sensitization - Category 1 [H334]

**2.2 Label elements**

**Hazard symbol(s):**



GHS08

**Signal word:** **Warning**

**Hazard statement(s):** H317 - May cause an allergic skin reaction  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary statements**

**[Prevention]** P261 - Avoid breathing dust.  
 P272 - Contaminated work clothing should not be allowed out of the work place.  
 P280 - Wear protective gloves, protective clothing and eye protection.  
 P285 - In case of inadequate ventilation wear respiratory protection.

**[Response]** P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P341 - IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P333 + P312 - If skin irritation or rash occurs: Get medical attention.  
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
 P363 - Wash contaminated clothing before reuse.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

None as defined under 29 CFR 1910.1200.

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
100	Benzylpenicillin potassium	113-98-4	204-038-0	-----	H317, H334

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## SECTION 4 - FIRST AID MEASURES

### 4.1 Description of first aid measures

**Inhalation:** If product dust causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention if the victim is experiencing breathing difficulty or anaphylaxis.

**Eyes:** Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do after first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

**Skin:** Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or if rash develops, seek immediate medical attention.

**Ingestion:** Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of vomit into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

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

#### Potential health symptoms and effects

**Eyes:** May cause mild to moderate eye irritation with redness, swelling, itching and tearing. May cause mechanical irritation of the cornea and surrounding tissue.

**Skin:** May cause skin irritation with localized redness and itching. May cause an allergic skin reaction in some individuals. Common signs and symptoms of penicillin allergy include hives, rash and itching. Severe reactions include anaphylaxis, a life-threatening condition that affects multiple body systems.

**Inhalation:** Dust may cause irritation of nose, throat and lungs. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Symptoms may include coughing, wheezing, breathing difficulties and anaphylaxis.

**Ingestion:** Ingestion of large amounts may cause digestive upset including gastrointestinal irritation. May cause allergic reaction.

**Chronic:** Persons with pre-existing skin disorders, eye problems or impaired respiratory function may be more susceptible to the effects of this material.

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

#### Advice to doctor and hospital personnel

Treat symptomatically and supportively.

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable methods of extinction:** Use extinguishing media suitable for the surrounding fire.

**Unsuitable methods of extinction:** No data available

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

Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

**Explosion hazards:** This material is not expected to be an explosive hazard.

### 5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

*Individuals who are allergic to penicillin antibiotics could have an allergic reaction, possibly severe, to this product and should not be employed in any process in which this product is used.*

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

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately.

### 6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

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

Approach spill from upwind direction. DO NOT FLUSH SPILLS DOWN THE DRAIN. Cover drains and contain spill. Minimize dust generation during cleanup. Carefully collect material and place into an approved container for proper disposal. Observe possible material restrictions

(Sections 7.2 and 10.5). Clean contaminated area with soap and water. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of material via a licensed pharmaceutical waste contractor and in accordance with FDA and DEA regulations..

#### 6.4 Reference to other sections

See Section 13 for additional waste treatment information.

### SECTION 7 - HANDLING AND STORAGE

*Individuals who are allergic to penicillin antibiotics could have an allergic reaction, possibly severe, to this product and should not be employed in any process in which this product is used.*

#### 7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale dust. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly before reuse. Avoid dust generation and accumulation.

##### Advice on protection against fire and explosion

This material is not expected to be a fire or explosion hazard.

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

Store in dry, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. Separate from oxidizing materials. Protect from sunlight. Transfer only to approved containers having correct labeling. Keep container tightly closed when not in use. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep locked up and out of reach of children.

#### 7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

### SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

**Engineering measures:** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

**Individual protection measures:** Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

**Hygiene measures:** Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

**Eye/face protection:** Wear safety glasses with unperforated side shields or chemical splash goggles during use.

**Hand protection:** Wear Nitrile gloves or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

**Skin protection:** Wear protective clothing. Wear protective boots if the situation requires.

**Respiratory protection:** None required with normal use. Wear an approved filter type dust respirator when handling this product. Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

**Environmental exposure controls:** Do not empty into drains.

*PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.*



Safety Glasses



Gloves



Protective Apron



Dust Respirator

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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

##### Appearance

White to off-white crystalline powder

<b>Odor</b>	Characteristic, faint
<b>Odor Threshold</b>	No data available
<b>Molecular Weight</b>	372.51 g/mol
<b>Chemical Formula</b>	C <sub>16</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S.K
<b>pH</b>	5.0 - 7.0 (10% solution)
<b>Melting Point</b>	No data available
<b>Boiling Point</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Flash Point</b>	Not applicable
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	> 228°C (> 442°F)
<b>Lower Explosive Limit (LEL)</b>	No data available
<b>Upper Explosive Limit (UEL)</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	No data available
<b>Viscosity</b>	No data available
<b>Solubility in Water</b>	Complete
<b>Partition Coefficient (n-octanol/water)</b>	No data available
<b>Oxidizing Properties</b>	Not applicable
<b>Explosive Properties</b>	Not applicable
<b>Volatiles by Weight @ 21 °C</b>	No data available

## 9.2 Other Data

No data available

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

No special reactivity has been reported during normal conditions of handling and use.

### 10.2 Chemical Stability

This material is stable under recommended conditions of storage and handling. Light sensitive material.

### 10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Elevated temperatures, incompatible materials, exposure to light

### 10.5 Incompatible materials

Strong oxidizing agents, strong acids

### 10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon, nitrogen oxides (NO<sub>x</sub>), sulfur oxides and potassium oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute oral toxicity

LD<sub>50</sub>, rat: > 8,900 mg/kg

#### Acute inhalation toxicity

No data available

#### Acute dermal toxicity

No data available

#### Skin irritation

May cause skin irritation.

#### Eye irritation

May cause eye irritation.

#### Sensitization

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Carcinogenicity

No data available

#### Germ cell mutagenicity

No data available

**Reproductive toxicity**

No data available

**Specific organ toxicity - single exposure**

May cause respiratory irritation.

**Specific organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Further information**

Individuals who are allergic to penicillin antibiotics could have an allergic reaction, possibly severe, to this product. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate medical treatment started.

May cause effects similar to those seen in clinical use including transient diarrhea, nausea and abdominal pain. Individuals that are sensitive to beta lactam antibiotics, both penicillins and cephalosporins, may experience contact or systemic hypersensitivity and anaphylaxis upon exposure to this drug.

This product contains no substances present at levels greater than or equal to the 0.1% threshold (de minimis) that are identified as a probable, possible, potential or confirmed carcinogens by ACGIH, IARC, NTP or OSHA.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12 - ECOLOGICAL INFORMATION

**12.1 Toxicity**

Large spills or discharges of this material may be harmful to aquatic life and the environment.

**12.2 Persistence and degradability**

This substance is expected to be readily biodegradable.

**12.3 Bioaccumulation potential**

This material will not bioaccumulate.

**12.4 Mobility in soil**

This product moves readily through soil.

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other effects****Additional ecological information**

Do not allow material to enter surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way via a licensed pharmaceutical waste contractor and in accordance with FDA and DEA regulations. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**RCRA F-Series:** No listings above the reportable threshold (de minimis)

**RCRA U-Series:** No listings above the reportable threshold (de minimis)

## SECTION 14 - TRANSPORT INFORMATION

**Note:** Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

<b>USA DOT (Ground Transportation) - Bulk and Non-bulk</b>	Not regulated for transport
<b>IMO/IMDG (Water Transportation)</b>	Not regulated for transport (Consult IMO regulations before transporting ocean bulk.)
<b>ICAO/IATA (Air Transportation)</b>	Not regulated for transport
<b>RID/ADR (Rail Transportation)</b>	Not regulated for transport

## SECTION 15 - REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations/legislation specific for substance or mixture****U. S. Federal Regulations**

**OSHA Hazard Communication Standard:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**OSHA Process Safety Management Standard:** This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

**EPA Risk Management Planning Standard:** This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

**EPA Federal Insecticide, Fungicide and Rodenticide Act:** This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

**Toxic Substance Control Act (TSCA) Inventory:** All substances in this product are listed on the TSCA Inventory. This product is intended for use in applications regulated by the Food and Drug Administration in the United States. This product is not subject to TSCA 12(b) Export Notification.

**Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.4(f)(2)) and Chemical Code Number**  
Not listed

**Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number:** Not listed

**Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals:** Not listed

**Superfund Amendments and Reauthorization Act (SARA)**

**SARA Section 311/312 Hazard Categories**

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

**SARA 313 Information:** None of the chemicals in this product are subject to the reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

**SARA 302/304 Extremely Hazardous Substance:** None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

**SARA 302/304 Emergency Planning & Notification:** None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

**Comprehensive Response Compensation and Liability Act (CERCLA):** None of the components of this product exceed the threshold (de minimis) reporting levels for hazardous wastes established by CERCLA.

**Clean Air Act (CAA)**

This product does not contain any Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 ozone depleters.

This product does not contain Class 2 ozone depleters.

**Clean Water Act (CWA)**

This product does not contain Hazardous Substances

This product does not contain Priority Pollutants.

This product does not contain Toxic Pollutants.

**U.S. State Regulations**

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

**Other U.S. State Inventories**

None of the components of this product exceed the threshold (de minimis) reporting levels established by any State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists.

**Canada**

**WHMIS Hazard Classification:** No data available

**Canadian National Pollutant Release Inventory (NPRI):** None of the substances in this product are listed on the NPRI.

**European Economic Community**

**WGK, Germany (Water danger/protection):** No data available

**Global Chemical Inventory Lists**

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	No
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

\*Yes - All components of this product comply with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory or are exempt from listing.

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16 - OTHER INFORMATION

### Hazardous Material Information System (HMIS)

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	F

F = safety glasses, gloves, apron & dust mask

### HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

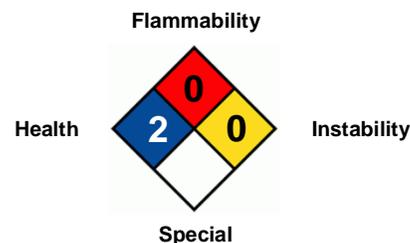
\* = Chronic Health Hazard

### NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate

3 = High 4 = Extreme

### National Fire Protection Association (NFPA)



### Abbreviation Key

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists	<b>LD<sub>50</sub></b>	Lowest Lethal Dose
<b>ADR</b>	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	<b>mppcf</b>	Millions of Particles Per Cubic Foot
<b>CAS</b>	Chemical Abstract Services	<b>NA</b>	North America
<b>CFR</b>	Code of Federal Regulations	<b>NAERG</b>	North American Emergency Response Guide Book
<b>COC</b>	Cleveland Open Cup	<b>NIOSH</b>	National Institute for Occupational Safety & Health
<b>DOT</b>	Department of Transportation	<b>NTP</b>	National Toxicology Program
<b>EC<sub>50</sub></b>	Half maximal effective concentration	<b>OSHA</b>	Occupational Safety and Health Administration
<b>EMS</b>	Emergency Response Procedures for Ships Carrying	<b>PBT</b>	Persistent, Bioaccumulating and Toxic
<b>EPA</b>	Environmental Protection Agency	<b>PEL</b>	Permissible exposure limit
<b>ErC<sub>50</sub></b>	Reduction of Growth Rate	<b>PMCC</b>	Pensky-Martens Closed Cup
<b>ERG</b>	Emergency Response Guide Book	<b>ppm</b>	Parts Per Million
<b>FDA</b>	Food and Drug Administration	<b>RCRA</b>	Resource Conservation and Recovery Act
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	<b>RID</b>	Dangerous Goods by Rail
<b>HCS</b>	Hazard Communication Standard	<b>RQ</b>	Reportable Quantity
<b>IARC</b>	International Agency for Research on Cancer	<b>TCC/Tag</b>	Tagliabue Closed Cup
<b>IATA</b>	International Air Transport Association	<b>TLV</b>	Threshold Limit Value
<b>IC<sub>50</sub></b>	Half Maximal Inhibitory Concentration	<b>TSCA</b>	Toxic Substance Control Act
<b>ICAO</b>	International Civil Aviation Organization	<b>TWA</b>	Time-weighted Average
<b>IDLH</b>	Immediately Dangerous to Life and Health	<b>UN</b>	United Nations
<b>IMDG</b>	International Maritime Dangerous Goods	<b>VOC</b>	Volatile Organic Compounds
<b>IMO</b>	International Maritime Organization	<b>vPvB</b>	Very Persistent and Very Bioaccumulating
<b>LC<sub>50</sub></b>	50% Lethal Concentration	<b>WHMIS</b>	Workplace Hazardous Materials Information System
<b>LD<sub>50</sub></b>	50% Lethal Dose		

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Supersedes SDS: 24 September 2012, Version 1

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