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MATERIAL SAFETY DATA SHEET  
REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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DATE UPDATED: JULY 12, 2014

**SECTION 1. ----- CHEMICAL IDENTIFICATION -----**

**Product Name** PENICILLIN  
**Product Code(s)** PB0135  
**Recommended Use** For Further Manufacturing Use Only  
Not for Human or Animal Drug Use  
**Recommended Use** antibiotic for cell culture, eliminates non-target bacteria by interfering with  
synthesis of bacterial cell wall  
**Synonyms** AMERICAN PENICILLIN \* BENZYL PENICILLINIC ACID SODIUM SALT \*  
BENZYL PENICILLIN SODIUM \* BENZYL PENICILLIN SODIUM SALT \*  
CRYSTAPEN \* MYCOFARM \* NOVOCILLIN \* PEN-A-BRASIVE \* PENICILLIN-  
G,  
MONOSODIUM SALT \* PENICILLIN G, SODIUM \* PENILARYN \* SODIUM  
BENZYL PENICILLIN \* SODIUM BENZYL PENICILLIN G \* SODIUM  
BENZYL PENICILLINATE \* SODIUM PENICILLIN G \* SODIUM PENICILLIN II \*  
VETICILLIN \*

**SECTION 2. ----- HAZARDS IDENTIFICATION -----**

**GHS – Classification**

**Classification** Skin Irritant 2 Eye Irritant 2 Skin Sensitizer 1 Respiratory Sensitizer 1

**Signal Word** Danger



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

**Precautionary Statements** P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P280 - Wear protective  
gloves/protective clothing/eye protection/face protection P342 + P311 - If  
experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician

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

<b>Chemical Name</b>	<b>EC No.</b>	<b>REACH Reg. No.</b>	<b>CAS-No</b>	<b>Weight %</b>	<b>Classification</b>
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenyl acetyl)amino]-[2-(2.alpha.,5.alpha.,6.beta.)]-, monosodium salt	EEC No. 200-710-2	Not available	69-57-8	95-100	R43

**SECTION 4. ----- FIRST-AID MEASURES -----**

<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water
<b>Notes to Physician</b>	Treat symptomatically

**SECTION 5. ----- FIRE FIGHTING MEASURES -----**

<b>Flammable Properties</b>	Not flammable
<b>Flash Point</b>	Not determined
<b>Suitable Extinguishing Media</b>	Dry chemical, CO2, water spray or regular foam.
<b>Hazardous Combustion Products</b>	Carbon oxides, Sulfur oxides, Nitrogen oxides (NOx).
<b><u>Explosion Data</u></b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive
<b>Sensitivity to Static Discharge</b>	Not sensitive
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----**

<b>Personal Precautions</b>	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so
<b>Methods for Cleaning Up</b>	Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

**SECTION 7. ----- HANDLING AND STORAGE-----**

**Handling** Handle in accordance with good industrial hygiene and safety practice.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place

**Incompatible Products** Acids. Heavy metal salts. Strong oxidizers. Alcohols. Glycerol.

**SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenylacetyl)amino]-[2-(2.alpha.,5.alpha.,6.beta.)]-, monosodium salt 69-57-8			

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

**Personal Protective Equipment**

**Eye/Face Protection** Safety glasses with side-shields.

**Skin and Body Protection** Wear protective gloves/clothing.

**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

**SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----**

**Appearance** Fine White  
**Odor** No information available  
**Odor Threshold** No information available  
**Decomposition Temperature °C** No information available  
**Freezing Point** No information available  
**Initial Boiling Point** No information available  
**Physical State** Powder  
**pH** No data available  
**Flash Point** Not determined  
**Autoignition Temperature** No data available  
**Boiling Point/Range** No data available  
**Melting Point/Range** No data available  
**Flammability Limits in Air** **Upper** No data available      **Lower** No data available  
**Explosive Properties** No information available  
**Oxidizing Properties** No information available  
**Evaporation Rate** No data available  
**MMHG @ 37.8 C** No data available  
**Vapor Density** No data available

**Specific Gravity** 1.41  
**Density** 1.41  
**Solubility** Soluble  
**Partition Coefficient (n-octanol/water)** No data available  
**Viscosity** No information available

**SECTION 10. -----STABILITY AND REACTIVITY -----**

**Stability** Stable under recommended storage conditions  
**Incompatible Products** Acids. Heavy metal salts. Strong oxidizers. Alcohols. Glycerol.  
**Conditions to Avoid** None known based on information supplied  
**Hazardous Decomposition Products** Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.  
**Hazardous Polymerization** Hazardous polymerization does not occur

**SECTION 11. ----- TOXICOLOGICAL INFORMATION -----**

**Acute Toxicity**

**Product Information** Causes skin, eye and respiratory tract irritation. Sensitizer.

<b>Chemical Name</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenylacetyl)amino]-[2-(2.alpha.,5.alpha.,6.beta.)]-, monosodium salt	6916 mg/kg ( Rat )		

**Chronic Toxicity** No known effect based on information supplied

**Target Organ Effects** None known.

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

**Waste Disposal Method** Dispose of material in accordance with all federal, state, and local regulations

**Contaminated Packaging** Dispose of in accordance with all federal, state and local regulations

**SECTION 14. ----- TRANSPORT INFORMATION -----**

**IATA** Not regulated

**DOT** Not regulated

**SECTION 15. ----- REGULATORY INFORMATION -----**

**REACH Title VII Restrictions** No information available.

<b>Chemical Name</b>	<b>Dangerous Substances</b>	<b>Organic Solvents</b>	<b>Harmful Substances Whose Names Are to be Indicated on the Label</b>	<b>Pollution Release and Transfer Registry (Class II):</b>	<b>Pollution Release and Transfer Registry (Class I):</b>	<b>Poison and Deleterious Substances Control Law:</b>
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenylacetyl)amino]-[2-(2.alpha.,5.alpha.,6.beta.)]-, monosodium salt	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

<b>Component</b>	<b>ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying</b>	<b>ISHA - Harmful Substances Requiring Permission</b>	<b>Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals</b>	<b>Toxic Release Inventory (TRI) - Group I</b>	<b>Toxic Release Inventory (TRI) - Group II</b>
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenylacetyl)amino]-[2-(2.alpha.,5.alpha.,6.beta.)]-, monosodium salt 69-57-8 ( 95-100 )	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**International Inventories**

**TSCA** Does not Comply  
**EINECS/ELINCS** Complies  
**ENCS** Does not Comply  
**IECSC** Complies  
**KECL** Does not Comply  
**PICCS** Does not Comply  
**AICS** Complies

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990

**CERCLA**

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**International Regulations**

**Mexico - Grade** No information available.

**Canada**

**WHMIS Hazard Class**

D2A Very toxic materials

D2B Toxic materials



**SECTION 16. ----- OTHER INFORMATION -----**

**Issuing Date** 13-Aug-2009

**Revision Date** 12-July-2014

**Revision Note** No information available.

**Recommended Restrictions** No information available

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**