

SAFETY DATA SHEET



Revision date 24-Feb-2021

Revision Number 1

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

NFPA	Health hazards 0	Flammability 0	Instability 0	Special hazards -
HMS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

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

- Legend Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION
 - TVA TWA (time-weighted average)
 - Ceiling Maximum limit value
 - STEL STEL (Short Term Exposure Limit)
 - Skin designation
- Key literature references and sources for data used to compile the SDS
- Agency for Toxic Substances and Disease Registry (ATSDR)
 - U.S. Environmental Protection Agency ChemView Database
 - European Food Safety Authority (EFSA)
 - EPA (Environmental Protection Agency)
 - Acute Exposure Guideline Level(s) (AEGGL(s))
 - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 - U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal
 - Hazardous Substance Database
 - International Uniform Chemical Information Database (IUCID)
 - National Institute of Technology and Evaluation (NITE)
 - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 - NIOSH (National Institute for Occupational Safety and Health)
 - National Library of Medicine's ChemID Plus (NLM CIP)
 - National Library of Medicine's Pubmed database (NLM PUBMED)
 - National Toxicology Program (NTP)
 - New Zealand's Chemical Classification and Information Database (CCID)
 - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 - Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 - Organization for Economic Co-operation and Development Screening Information Data Set
 - World Health Organization

Revision date 19-Jan-2022

Revision Note Significant changes throughout SDS. Review all sections.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge. Information and better 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 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet

1. Identification

Product Identifier
Ampicillin, lyophilized

Product Name

Other means of identification
1660407, 1660407EDU, 9702928

Catalog Number(s)

Recommended use of the chemical and restrictions on use
Laboratory chemicals

Recommended use

Details of the supplier of the safety data sheet

<p>Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA</p>	<p>Manufacturer Address Bio-Rad Laboratories 2000 Alfred Nobel Drive Hercules, California 94547 USA</p>	<p>Legal Entity/Contact Address Bio-Rad Laboratories Life Science 2000 Alfred Nobel Drive Hercules, California 94547</p>
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Technical Service 1-800-424-6723
support@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC USA, 1 (800) 424-9300

2. Hazard(s) identification

Classification

Respiratory sensitization	Category 1
Skin sensitization	Category 1A

Hazards not otherwise classified (HNOC)
Not applicable

Label elements
Danger

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



Appearance crystalline	Physical state Solid	Odor Odorless
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The following values are calculated based on chapter 3.1 of the GHS document
ATEmx (oral)
5,398.20 mg/kg

Component information		
Chemical name Sodium chloride 7647-14-5	Oral LD50 = 3 g/kg (Rat)	Dermal LD50 > 10000 mg/kg (Rabbit)
		Inhalation LC50 > 42 mg/L (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium chloride 7647-14-5		LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: = 12946mg/L (96h, Lepomis macrochirus)		EC50: 3407 - 4692mg/L (48h, Daphnia magna) EC50: = 1000mg/L (48h, Daphnia magna)

	LC50 = 7050mg/L (96h, Pimephales promelas)
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Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

TDG Not regulated

MEX Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory information

International Inventories Contact supplier for inventory compliance status

US Federal Regulations

SARA 313

Section 313 of Title II of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (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).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

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Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapor/spray
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing must not be allowed out of the workplace
Wear protective glove/protective clothing/eye protection/face protection
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable
No information available.

3. Composition/Information on ingredients

Substance	Chemical name	CAS No	Weight-%	Trade secret
Not applicable	Sodium	69-52-3	50 - 100	
Mixture	[2S-[2.alpha.5.alpha.6.beta.(S)]]-6-(aminophenyl)cecliamido]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate			

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, tilting lower and upper eyelids. Consult a physician.

Skin contact Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion May produce an allergic reaction. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention. Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 3 for more information.

Most important symptoms and effects, both acute and delayed

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Symptoms

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Extinguishing Media Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

Explosion data Sensitivity to mechanical impact None

Sensitivity to static discharge None

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

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 Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eyeface protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or imitation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eyeface protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance crystalline
Color light yellow
Odor Odorless
Odor threshold No information available

Property Values

pH 240 °C / 464 °F
Melting point / freezing point No data available
Boiling point / boiling range No data available
Flash point No data available
Evaporation rate No data available
Flammability (solid, gas) No data available
Flammability Limit in Air No data available
Upper flammability or explosive limits No data available
Lower flammability or explosive limits No data available
Vapor pressure No data available
Vapor density No data available
Relative density No data available
Water solubility Soluble in water
Solubility(ies) No data available
Partition coefficient No data available
Autoignition temperature No data available
Decomposition temperature No data available
Kinematic viscosity No data available

Remarks - Method

None known
None known
None known
None known
None known
None known
None known
None known
None known
None known
None known

Dynamic viscosity No data available

None known

Other information

Explosive properties No information available
Oxidizing properties No information available
Sensitizing point No information available
Molecular weight No information available
VOC Content (%) No information available
Liquid Density No information available
Bulk density No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions

Possibility of hazardous reactions None under normal processing

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product information

Inhalation

Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components)

Eye contact

Specific test data for the substance or mixture is not available.

Skin contact

Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons (based on components). May cause sensitization by skin contact.

Ingestion

Specific test data for the substance or mixture is not available. May cause additional effects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing, itching, Rashes, Hives.

Acute toxicity

Numerical measures of toxicity

No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
(2S)-12.alpha..5.alpha..6.beta.(S*)-11]-6-(aminopenicillamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	> 5314 mg/kg (Rat)	-	-

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69-52-3

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by inhalation. May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC Group 3	NTP	OSHA
Sodium [2S-(2.alpha.,3.alpha.,6.beta.), (5S)-1]-6-(aminophenyl)acetamido]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	-	Group 3	-	-

Legend

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

Ampicillin, lyophilized

Revision date 24-Feb-2021

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

IDG Not regulated

MEX Not regulated

IATA Not regulated

IHDG Not regulated

15. Regulatory information

International inventories Contact supplier for inventory compliance status.

US Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (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).

CECRLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CECRLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations.

Ampicillin, lyophilized

Revision date 24-Feb-2021

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

SAFETY DATA SHEET

Revision date 19-Aug-2021

Revision Number 2



1. Identification

Product identifier

Product Name Arabinose Lyophilized

Other means of identification

Catalog Number(s) 1660406, 1660406EDU, 9702997

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Details of the supplier of the safety data sheet

Corporate Headquarters **Manufacturer Address**
 Bio-Rad Laboratories Inc. Bio-Rad Laboratories, Life Science Group
 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive
 Hercules, CA 94547 USA Hercules, California 94547
 USA

Legal Entity / Contact Address
 Bio-Rad Laboratories
 Life Science
 2000 Alfred Nobel Drive
 Hercules, California 94547

Technical Service 1-800-424-8723
 support@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC USA 1 (800) 424-9300

2. Hazard(s) identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
 Not applicable

Label elements

Hazard statements
 This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Precautions
 The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance powder or cake, lyophilized **Physical state** Solid **Odor** Odorless

Other information
 No information available.

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMS Health hazards 2. Flammability 0 Physical hazards 0 Personal protection X
 Chronic Health Hazard

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

Legend Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

TWA (time-weighted average) STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value Skin designation

Key literature references and sources for data used to compile the SDS

- Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGUL(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- National Institute of Technology and Evaluation (NITE)
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
- NIOSH (National Institute for Occupational Safety and Health)
- National Library of Medicine's ChemID Plus (NLM CIP)
- National Library of Medicine's PubMed database (NLM PUBMED)
- National Toxicology Program (NTP)
- New Zealand's Chemical Classification and Information Database (CCID)
- Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
- Organization for Economic Co-operation and Development High Production Volume Chemicals Program
- Organization for Economic Co-operation and Development Screening Information Data Set
- World Health Organization

Revision date 24-Feb-2021
Revision Note SDS sections updated 1 2

Disclaimer

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End of Safety Data Sheet