

# Safety Data Sheet



**Trade Name:** US-664B Antimicrobial Additive

## SECTION 1. IDENTIFICATION

**Date of issue:** 10.3.2018

**Product Name:** US-664B  
**Chemical Name:** Antimicrobial additive  
**Other means of identification:** none

**Recommended use of the chemical and restrictions on use:**  
**Recommended use:** Polyurethane foam additive  
**Recommended restrictions:** Uses other than as recommended above

**Company Name:** Urethane Sciences, LLC  
**Company Address:** 121 Cross Keys Road, Building E  
Berlin, NJ 08009  
**Company Telephone:** Phone: (856) 282-4506  
**Company Contact Email:** info@usci.net

**Emergency Phone:** ChemTrec (24 Hours): 1-800-424-9300  
(Outside of USA 202-366-4488)

## SECTION 2: HAZARD(S) IDENTIFICATION

### *Physical hazards*

None Identified

### *Health hazards*

Acute Toxicity, Oral (Category 4)  
Skin Corrosion/ Irritation (Category 1C)  
Skin Sensitization (Category 1)  
Serious Eye Damage/Irritation (Category 2A)

### *Environmental hazards*

Hazardous to the aquatic environment – Acute (Category 1)  
Hazardous to the aquatic environment – Chronic (Category 1)

**GHS Signal word:** DANGER

**GHS Hazard statement(s):** Harmful if swallowed.

## US-664B Antimicrobial Additive

May cause an allergic skin reaction.  
Causes severe skin burns and eye damage  
Very toxic to aquatic life with long lasting effects

### GHS Hazard symbol(s):



### Precautionary statement(s):

#### Prevention:

Avoid breathing dust/ fume/ gas/ mist/ vapor / spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear eye protection/ face protection.  
Wear protective gloves.

#### Response:

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation or rash occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.  
Wash contaminated clothing before reuse.

#### Storage:

Store in a dry place. Store in a closed container.  
Protect from sunlight. Store in a well-ventilated place.

#### Disposal:

Dispose of contents/ container to an approved waste disposal plant.

**Hazard(s) not otherwise Classified (HNOC):** None known

## SECTION 3: Composition/Information on ingredients

## US-664B Antimicrobial Additive

CHEMICAL NAME	CAS #	Concentration (weight %)
n-Butyl 1,2-Benzisothiazolin-3-one	4299-07-4	42-43%
Zinc Pyrithione	13463-41-7	7-8 %

Note: The balance of the ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

The manufacturer has claimed one or more ingredients as trade secret under the OSHA Hazard Communication Standard.

### SECTION 4: FIRST AID MEASURES

**Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:**

**General:** Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Inhalation:** Allow victim to breathe fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**Skin contact:** Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse for a minimum of 15-20 minutes. Safety shower should be available.

**Eye contact:** Rinse immediately with plenty of water for a minimum of 20 minutes. Remove contact lenses after 5 minutes and continue to rinse. Obtain medical attention if effects occur.

**Ingestion:** Rinse mouth. Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Indication of immediate medical attention and special treatment needed:** Treatment should control symptoms and is dependent upon the condition of the patient.

## SECTION 5: FIRE FIGHTING MEASURES

### **Suitable (and unsuitable) extinguishing media:**

**Suitable extinguishing media:** Foam. Dry powder. Carbon dioxide. Dry chemical. Dry sand. Limestone powder.

**Unsuitable extinguishing media:** Do not use heavy water stream as fire may spread.

### **Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):**

Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases.

**Special protective equipment and precautions for fire-fighters:** Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Evacuate unnecessary personnel. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Notify authorities if liquid enters sewers or public waters. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. See Section 13, Disposal Considerations, for additional information.

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact and inhalation of the vapors. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. A sensitized individual should not be exposed to the product which caused the sensitization. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage, including any incompatibles:** Do not store near feed, food, or within the reach of children. Protect from freezing. Freezing will damage the integrity of the dispersion. Always keep the container(s) tightly closed.

### **Control parameters**

## US-664B Antimicrobial Additive

Product should be agitated by physical shaking or rotating of drum periodically during prolonged periods of storage to maintain integrity of dispersion. The product should always be mixed thoroughly prior to use. Protect from freezing. Freezing will damage the integrity of the dispersion. No shelf life limit established. Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure controls

**Engineering controls:** General ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

**Eye/face protection:** Chemical goggles.

#### Skin protection

**Hand protection:** Wear protective gloves. Butyl-rubber. Nitrile rubber. Neoprene gloves. Impervious gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.

The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Long sleeve shirts and trousers without cuffs.

**Other protection:** Do not eat, drink or smoke during use. Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers.

**Respiratory protection:** Not required for properly ventilated areas.

#### Exposure Limits:

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Zinc Pyrithione (13463-41-7)	TWA	0.35 mg/m <sup>3</sup>	OEL*

Occupational Exposure Guideline.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

<b>Physical state:</b>	Liquid
<b>Form:</b>	Mixture
<b>Color:</b>	Light Brown Fluid
<b>Odor:</b>	None
<b>Odor threshold:</b>	
<b>pH:</b>	Not available
<b>Melting point:</b>	Not available
<b>Freezing point:</b>	Not available
<b>Initial boiling point and boiling range:</b>	Not available
<b>Flash point:</b>	Not available
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gas):</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower %):</b>	Not available
<b>Flammability limit – upper (%):</b>	Not available
<b>Explosive limit – lower (%):</b>	Not available
<b>Explosive limit – upper (%):</b>	Not available
<b>Vapor pressure:</b>	
<b>Vapor density:</b>	No data available
<b>Relative density:</b>	1.0
<b>Solubility (ies):</b>	Partially dispersible in water
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity (dynamic):</b>	700 cPs
<b>% Volatile:</b>	Not volatile near room temperature

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity:</b>	Not available.
<b>Chemical stability:</b>	Stable under normal ambient conditions and anticipated conditions of use.
<b>Possibility of hazardous reactions:</b>	Product will not undergo hazardous polymerization.

## US-664B Antimicrobial Additive

<b>Conditions to avoid:</b>	Direct sunlight. Extremely high or low temperatures.
<b>Incompatible materials:</b>	Strong acids. Strong bases. Oxidizing materials
<b>Hazardous decomposition products:</b>	Carbon monoxide, Carbon dioxide, Oxides of nitrogen, Oxides of sulfur, Ammonia

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Component Animal Toxicology

##### Oral LD50 value:

n-Butyl-1-2 Benzisothiazolin-3-one	LD50	4,267 mg/kg	Rat
Zinc Pyrithione	LD50	269 mg/kg	Rat

#### Component Animal Toxicology

##### Dermal LD50 value:

n-Butyl-1,2-Benzisothiazolin-3-one	LD50 > 2,000 mg/kg Rat
Zinc Pyrithione	LD50 > 2,000 mg/kg Rabbit

#### Component Animal Toxicology

##### Inhalation LC50 value:

n-Butyl-1,2-Benzisothiazolin-3-one	Inhalation LC50 4h (Nose Only), (aerosol dust) = 0.089 mg/l Female Rat
Zinc Pyrithione	LC50 4 h (Nose Only), (aerosol dust) = 1.03 mg/l Rat LC50 1 h (Nose Only), (aerosol dust) = 4.12 mg/l Rat

Skin Irritation:	The material is expected to be corrosive
Eye Irritation:	This material is expected to be severely irritating.
Skin Sensitization:	May cause allergic skin sensitization in some individuals.

n-Butyl 1,2-Benzisothiazolin-3-one This material tested positive for skin sensitization in humans and laboratory animals.

Zinc Pyrithione This material tested negative for skin sensitization in humans and laboratory animals.

Acute Toxicity: Severe eye irritation

Subchronic / Chronic Toxicity: Skeletal muscle atrophy has been observed from oral and dermal exposure in rats to pyrithione compounds. Exposure to monkeys at several times the dose given to rats gave no

## US-664B Antimicrobial Additive

	indication of either muscle or nerve damage. Although these effects are possible with human exposure, the evaluation of the animals toxicological data makes the above effects unlikely from industrial product use.
Reproductive and Developmental Toxicity:	This chemical is not known or reported to affect reproductive function or fetal development.
n-Butyl 1,2-Benzisothiazolin-3-one	This product has been tested in laboratory animals and was found to cause developmental toxicity only at maternally toxic doses. However, no teratogenic effects were seen at any of the doses tested.
Zinc Pyrithione	This chemical is not considered to be a reproductive or developmental hazard. However, this material when tested in laboratory animals at maternally toxic doses only was found to cause developmental and/or reproductive toxicity.
Mutagenicity:	Not known or reported to be mutagenic.
n-butyl 1,2-Benzisothiazolin-3-one	This chemical has been shown to be non-mutagenic based on a battery of assays.
Zinc Pyrithione	This chemical has been shown to be non-mutagenic based on a battery of assays.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Zinc Pyrithione	This material did not cause cancer in long-term animal studies.

## SECTION 12: ECOLOGICAL INFORMATION

*Highly/very toxic to fish and other aquatic organisms.*

### Ecological Toxicity Values for: n-Butyl 1,2-Benzisothiazolin-3-one

Rainbow trout ( <i>Salmo gairdneri</i> )	(flow-through). 96 h LC50 = 0.15 mg/l
Bluegill sunfish	(flow-through). 96 h LC50 = 0.54 mg/l
Daphnia magna	48 h EC50 = 0.093 mg/l
Green algae	72 h EC50 = 0.24 mg/l
Pseudomonas putida	6 hr 1C10 Approximately 0.2 mg/l

### Ecological Toxicity Values for: Zinc Pyrithione

Rainbow trout ( <i>Salmo gairdneri</i> )	(measured, flow-through) 96 h LC50 = 0.0032 mg/l
Pimephales promelas (fathead minnow)	(measured, flow-through) 96 h LC50 = 0.0026 mg/l



## US-664B Antimicrobial Additive

Sheepshead minnow	(measured, static) 96 h LC50 = 0.4 mg/l
Daphnia magna	(measured, flow-through) 48 h LC50= 0.0082 mg/l
Daphnia magna	(measured, flow-through) 48 h EC50= 0.034 mg/l
Daphnia magna	(measured, flow-through) 21 day EC50 (chronic toxicity) = 0.029 mg/l
Selenastrum capricornutum (freshwater algae)	(measured, static) 120 h EC50 = 0.028 mg/l
Lemna gibba G3 (Duckweed)	(measured, flow-through) 7 day EC50 = 0.0096 mg/l

### SECTION 13: DISPOSAL CONSIDERATIONS

**Disposal methods:** Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

### SECTION 14: Transport Information

#### US Department of Transportation Classification (49CFR)

UN/ID No.:	UN1760
Proper shipping name:	Corrosive liquid, n.o.s., ( n-Butyl 1,2-Benzisothiazolin-3-one, zinc pyrrithione)
Class or Division:	8
Packing group :	III
RQ Substance:	Yes
Marine Pollutant:	Yes

#### Maritime transport IMDG

UN/ID No.:	UN1760
Proper shipping name:	Corrosive liquid, n.o.s., ( n-Butyl 1,2-Benzisothiazolin-3-one, zinc pyrrithione)
Class or Division:	8
Packing group :	III
RQ Substance:	Yes
Marine Pollutant:	Yes

#### Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

UN/ID No.:	UN1760
Proper shipping name:	Corrosive liquid, n.o.s., ( n-Butyl 1,2-Benzisothiazolin-3-one, zinc pyrrithione)
Class or Division:	8
Packing group :	III
RQ Substance:	Yes
Marine Pollutant:	Yes

#### Air transport ICAO-TI and IATA-DGR

UN/ID No.:	UN1760
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## US-664B Antimicrobial Additive

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Class or Division: 8  
Packing group : III  
RQ Substance: Yes  
Marine Pollutant: Yes

**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.**

NOTE: This product contains a USDOT Hazardous Substance and will meet the Reportable Quantity definition when shipped to, from, or within the United States, in the amount specified in 49CFR 172.101 Appendix A.

Material is not regulated for ground transportation within the US if shipped in non-Bulk packages.  
Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages.

### SECTION 15: REGULATORY INFORMATION

#### Federal Regulations

##### Toxic Substances Control Act (TSCA)

TSCA The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.  
TSCA This is an EPA registered pesticide.

#### STATE REGULATIONS:

##### New Jersey Worker and Community Right-to-Know Act

Components	CAS-No.
Zinc pyrithione	13463-41-7
n-Butyl 1,2-Benzisothiazolin-3-one	4299-07-4

##### Pennsylvania Worker and Community Right-to-Know Act

Components	CAS-No.
Zinc pyrithione	13463-41-7
n-Butyl 1,2-Benzisothiazolin-3-one	4299-07-4

##### California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986):

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**SECTION 16: OTHER INFORMATION**

HMIS Ratings

Health – 3

Flammability – 1

Physical Hazard - 0

Revision Date: 6/16/2020

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