



SAFETY DATA SHEET

Nutrition & Biosciences USA 2, LLC

Product name: ROCIMA™ BT 2S MICROBICIDE

Issue Date: 05/06/2022

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Nutrition & Biosciences USA 2, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: ROCIMA™ BT 2S MICROBICIDE

Recommended use of the chemical and restrictions on use

Identified uses: Biocidal product

COMPANY IDENTIFICATION

Nutrition & Biosciences USA 2, LLC
1209 Orange Street
Wilmington DE 19801
UNITED STATES

Customer Information Number:

1-800-526-3649
SDS.ENABLERS@iff.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1-800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Corrosive to metals - Category 1

Acute toxicity - Category 4 - Oral

Skin corrosion - Category 1C

Serious eye damage - Category 1

Skin sensitisation - Category 1

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

May be corrosive to metals.

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Precautionary statements**Prevention**

Keep only in original container.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ 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 protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Storage

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Disposal

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

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Organic Mixture Aqueous

This product is a mixture.

Component	CASRN	Concentration
1,2-Benzisothiazolin-3-one	2634-33-5	>= 10.0 - < 20.0 %
Sodium hydroxide	1310-73-2	>= 5.0 - < 10.0 %

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Consult a physician.

Skin contact: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion: Clean mouth with water and drink afterwards plenty of water. If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: MATERIAL IS CORROSIVE. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions maybe necessary.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use the following extinguishing media when fighting fires involving this material: Dry powder Carbon dioxide (CO₂) Foam Water spray

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.

Unusual Fire and Explosion Hazards: Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Wear respiratory protection. MATERIAL IS CORROSIVE. If exposed to material during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. MATERIAL IS A POTENTIAL SENSITIZER.

Environmental precautions: Prevent product from entering drains. Do not contaminate surface water.

Methods and materials for containment and cleaning up: WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material. See Section 13, "Disposal Considerations", for information regarding the disposal of contained materials.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. For personal protection see section 8. Wear personal protective equipment. Plan first aid action before beginning work with this product. May cause sensitisation of susceptible persons by skin contact. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage stability

Other data: No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
1,2-Benzisothiazolin-3-one	Dow IHG	TWA	0.06 mg/m3
	Dow IHG	STEL	0.1 mg/m3
Sodium hydroxide	ACGIH	C	2 mg/m3
	Further information: URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; skin irr: Skin irritation		
	OSHA Z-1	TWA	2 mg/m3
	CAL PEL	C	2 mg/m3

Exposure controls

Engineering controls: Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Hygiene measures: Shower or bathe at the end of working.

Individual protection measures

Eye/face protection: Tightly fitting safety goggles Face-shield

Skin protection

Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Nitrile rubber butyl-rubber Rinse and remove gloves immediately after use. Wash hands with soap and water. NOTE: Material is a possible skin sensitizer.

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Where vapors and/or mists may occur, wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid clear
Color	Yellow to brown
Odor	Mild odor
Odor Threshold	No data available
pH	12 - 13 10% Solution
Melting point/range	-40 °C (-40 °F)
Freezing point	No data available
Boiling point (760 mmHg)	100 °C (212 °F)
Flash point	>93 °C (199 °F) <i>SETAFLASH CLOSED CUP</i>
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	12.2 mmHg at 25 °C (77 °F)
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.13 at 25 °C (77 °F)
Water solubility	soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	305 °C (581 °F) Solvent
Decomposition temperature	No data available
Dynamic Viscosity	200 - 500 mPa.s at 25 °C (77 °F)

Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	70.26 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: No data available

Possibility of hazardous reactions: Product will not undergo polymerization.
Stable under recommended storage conditions.

Conditions to avoid: No data available

Incompatible materials: Incompatible with strong acids and oxidizing agents. Amines Mercaptans.
Reducing agents

Hazardous decomposition products: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

LD50, Rat, 1,049 mg/kg

Acute dermal toxicity

LD50, Rat, > 2,000 mg/kg

Acute inhalation toxicity

Product test data not available. Refer to component data.

Skin corrosion/irritation

Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

Corrosive

Sensitization

May cause sensitisation by skin contact.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available. Refer to component data.

Carcinogenicity

Product test data not available. Refer to component data.

Teratogenicity

Did not show teratogenic effects in animal experiments.

Reproductive toxicity

No toxicity to reproduction

Mutagenicity

Non-mutagenic

Aspiration Hazard

Product test data not available. Refer to component data.

Additional information

No data are available for this material. The information shown is based on profiles of compositionally similar materials.

COMPONENTS INFLUENCING TOXICOLOGY:**1,2-Benzisothiazolin-3-one****Acute inhalation toxicity**

The LC50 has not been determined.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

No relevant data found.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Sodium hydroxide**Acute inhalation toxicity**

The LC50 has not been determined.

Specific Target Organ Systemic Toxicity (Single Exposure)

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity

No relevant data found.

Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

General Information

There is no data available for this product.

Toxicity**1,2-Benzisothiazolin-3-one****Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 Hour, 1.9 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), flow-through test, 48 Hour, 3.7 mg/l, OECD Test Guideline 202 or Equivalent

LC50, Mysid shrimp (*Mysidopsis bahia*), 96 Hour, 1.9 mg/l

Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Growth rate, 0.8 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Growth rate, 0.21 mg/l, OECD Test Guideline 201 or Equivalent

ErC50, diatom *Skeletonema costatum*, static test, 72 Hour, Growth rate, 0.36 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, diatom *Skeletonema costatum*, static test, 72 Hour, Growth rate, 0.15 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50, Bacteria (active sludge), Respiration inhibition of activated sludge, 3 Hour, 28.52 mg/l

Sodium hydroxide**Acute toxicity to fish**

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Persistence and degradability

1,2-Benzisothiazolin-3-one

Biodegradability: Abiotic degradation: The material is rapidly degradable by abiotic means.

10-day Window: Fail

Biodegradation: 24 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.22 mg/mg

Photodegradation

Sensitization: OH radicals

Atmospheric half-life: 7.6 hrs

Method: Estimated.

Sodium hydroxide

Biodegradability: Biodegradability is not applicable to inorganic substances.

Bioaccumulative potential**1,2-Benzisothiazolin-3-one**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 1.19 OECD Test Guideline 117 or Equivalent

Bioconcentration factor (BCF): 3.2 Fish Calculated.

Sodium hydroxide

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in soil**1,2-Benzisothiazolin-3-one**

Potential for mobility in soil is high (Koc between 50 and 150).

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient (Koc): 104 Estimated.

Sodium hydroxide

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 14 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of as special waste in compliance with local and national regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Corrosive liquid, basic, organic, n.o.s.(1,2-Benzisothiazolin-3-one, Sodium hydroxide)
UN number	UN 3267
Class	8
Packing group	III

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(1,2-Benzisothiazolin-3-one, Sodium hydroxide)
UN number	UN 3267
Class	8
Packing group	III
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Corrosive liquid, basic, organic, n.o.s.(1,2-Benzisothiazolin-3-one, Sodium hydroxide)
UN number	UN 3267
Class	8
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Corrosive to metals
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Sodium hydroxide	1310-73-2	1000 lbs RQ

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

California Prop. 65

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

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

United States TSCA Inventory (TSCA)

This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number: 707-314

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER

corrosive

Causes irreversible eye damage

Causes skin burns

May be fatal if inhaled

Harmful if swallowed

Harmful if absorbed through the skin

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This product is toxic to fish and aquatic invertebrates.

16. OTHER INFORMATION

Hazard Rating System

HMIS

Health	Flammability	Physical Hazard
3	1	0

Revision

Identification Number: 10334400 / A746 / Issue Date: 05/06/2022 / Version: 4.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling limit
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short term exposure limit
TWA	8-hour time weighted average

Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Nutrition & Biosciences USA 2, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

US