# Safety Data Sheet: BD001

**Version**: 02 **Manufacturer**: Azora Biosciences **Phone:** +1 916 4148380

*Prepared in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.*

## 1. Identification

| | |
|---|---|
| **Product Name:** | BD001 |
| **Product Number / Brand:** | BD001 / Azora Biosciences |
| **Other Means of Identification:** | Binding Buffer |
| **Recommended Use:** | Laboratory reagent for nucleic acid extraction and purification. |
| **Restrictions on use** | For research and laboratory purposes only. Not for household, food, drug or consumer use. |
| **Manufacturer / Distributor:** | Azora Biosciences North America Inc. |
| **Address:** | 2108 N ST,<br># 12089<br>SACRAMENTO, CA 95816 |
| **Telephone / Emergency Contact:** | +1 916 414 8380<br>Available Monday–Friday, 9:00 AM–5:00 PM New Zealand time (NZST/NZDT), excluding New Zealand public holidays. |
| **For life-threatening emergencies, call 911.** | |

## 2. Hazard(s) Identification

***Classification under 29 CFR 1910.1200:***

Acute Toxicity (Oral): Category 4
Skin Irritation: Category 2
Eye Irritation: Category 2

***Hazard pictograms***



***Signal Word***

Warning

***Hazard Statements***

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

***<u>Precautionary Statements</u>***

***Prevention:***

P264 Wash hands and exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves and eye/face protection.

***Response:***

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

***Storage:***
Keep container tightly closed. Store in a cool, dry, well-ventilated place away from incompatible materials.

***Disposal:***
P501 Dispose of contents/container in accordance with applicable federal, state and local regulations.

***Hazards not otherwise classified***
Do not mix with sodium hypochlorite bleach or other chlorine-releasing chemicals. Hazardous reaction products may be generated.

## 3. Composition and Information on Ingredients

**Substance/Mixture:** Mixture

| Ingredients | CAS Number | Concentration |
|---|---|---|
| Guanidine hydrochloride | 50-01-1 | 70–80% w/v |

Ingredients requiring disclosure under 29 CFR 1910.1200 are listed, including ingredients presenting a health risk below applicable disclosure thresholds.

The exact concentrations of the listed ingredients are withheld as trade secrets in accordance with 29 CFR 1910.1200(i). The ranges shown contain the actual concentrations. Hazard classification is based on the actual formulation.

## 4. First-aid Measures

***Description of First Aid Measures:***
*Inhalation:* Move the person to fresh air and keep comfortable for breathing. Seek medical advice if coughing, respiratory irritation or difficulty breathing occurs.
*Skin contact:* Remove contaminated clothing. Wash the affected skin thoroughly with plenty of water. Seek medical advice if irritation occurs or persists. Wash contaminated clothing before reuse.
*Eye contact:* Immediately rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical advice if irritation, pain or visual disturbance persists.
*Ingestion:* Rinse mouth. Do not induce vomiting unless directed by a medical professional. Contact a POISON CENTER or physician for medical advice. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, acute and delayed**
Inhalation of mist or spray may cause respiratory irritation.
Skin contact may cause redness, irritation and discomfort.
Eye contact may cause serious eye irritation, including redness, pain and watering.
Ingestion may cause gastrointestinal irritation and harmful systemic effects.

**Indication of any immediate medical attention and special treatment needed**
Treat symptomatically. Medical assessment is recommended after significant exposure or persistent symptoms.

## 5. Fire-fighting Measures

**Extinguishing Media**
*Suitable extinguishing media:* Water spray, foam, carbon dioxide (CO2) or dry chemical powder. Use extinguishing media appropriate for the surrounding fire.
Unsuitable extinguishing media: No specific restrictions identified.

**Special hazards arising from the substance or mixture**
The product is an aqueous solution and is not classified as flammable.
Thermal decomposition may generate hazardous or irritating gases, including hydrogen chloride and nitrogen-containing decomposition products.
Containers may rupture when exposed to excessive heat.

**Protective equipment and precautions for firefighters**
Wear self-contained breathing apparatus and appropriate protective clothing when fighting fires involving this product.
Avoid inhalation of decomposition fumes.
Cool exposed containers with water spray where safe to do so.

## 6. Accidental Release Measures

***Personal precautions and emergency procedures***

Avoid contact with skin and eyes.

Avoid breathing mist or spray.

Ensure adequate ventilation.

Wear suitable chemical-resistant gloves, protective clothing and chemical splash goggles.

Restrict unnecessary access to the spill area.

***Containment and cleanup***

Contain the spill where safe to do so.

Absorb spilled liquid with suitable inert absorbent material.

Transfer collected material to an appropriately labeled chemical waste container.

Clean affected surfaces thoroughly with water after removal of bulk material.

Do not use sodium hypochlorite bleach or chlorine-releasing cleaning agents.

***Environmental precautions***

Avoid uncontrolled release to drains, soil, waterways or the surrounding environment.

## 7. Handling and Storage

**Precautions for safe handling**
Avoid contact with skin and eyes.
Avoid inhalation of mist or spray.
Wear appropriate protective gloves, laboratory clothing and eye protection.
Use in adequately ventilated areas.
Avoid unnecessary splashing and aerosol generation.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when handling this product.
Do not mix with sodium hypochlorite bleach or other chlorine-releasing chemicals.
Use good laboratory hygiene and chemical handling practices.

**Conditions for safe storage, including any incompatibilities**
Keep containers tightly closed and correctly labeled.
Store in a cool, dry, well-ventilated area.

Protect from excessive heat and incompatible materials.
Keep away from strong oxidizing agents and chlorine-releasing chemicals.
Follow the manufacturer's recommended storage conditions.

## 8. Exposure Controls/Personal Protection

**Control parameters**

***Ingredients with workplace control parameters***

No OSHA PELs, ACGIH TLVs or other applicable occupational exposure limits have been identified for ingredients disclosed in Section 3. No specific occupational exposure limit has been established for the finished mixture.

**Engineering controls**

Provide adequate general laboratory ventilation.
Minimize the formation of mist or aerosols.
Use suitable containment or local exhaust ventilation where mist or aerosol generation is foreseeable.
Provide access to emergency eyewash facilities.

**Eye/face protection:** Wear chemical splash goggles. Additional face protection should be used where significant splashing is foreseeable.

**Hand protection:** Wear appropriate chemical-resistant gloves. Select glove material according to the duration and conditions of exposure and available chemical-resistance data.

**Skin/body protection:** Wear a laboratory coat and suitable protective clothing.

**Respiratory protection:** Not normally required for routine handling as a liquid under adequate ventilation. Where mist or aerosol exposure cannot be adequately controlled, select suitable respiratory protection through an occupational exposure assessment and use it in accordance with OSHA 29 CFR 1910.134.

**Hygiene measures:** Wash hands thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not eat, drink or smoke in laboratory work areas.

## 9. Physical and Chemical Properties

| | |
|---|---|
| **Physical state** | Liquid |
| **Color** | Colorless |
| **Odor** | Odorless |
| **Odor threshold** | Not determined / Not applicable |
| **Melting point/freezing point** | Not determined |
| **Boiling point or range** | Not determined |
| **Flammability** | Not classified as flammable; aqueous solution |
| **Lower and upper explosion/flammability limits** | Not determined |
| **Flash point** | Not determined |
| **Auto-ignition temperature** | Not determined |
| **Decomposition temperature** | Not determined |
| **pH** | Approximately 7.8 at 20–25°C |
| **Kinematic viscosity** | Not determined |
| **Solubility** | Miscible |
| **Partition coefficient, n-octanol/water** | No information available for the mixture |
| **Vapor pressure** | Not determined |
| **Evaporation rate** | Not determined |
| **Density and/or relative density** | Not determined |
| **Relative vapor density** | Not determined |
| **Particle characteristics** | Not applicable to supplied liquid. |

***Other information:***

None known.

## 10. Stability and Reactivity

| | |
|---|---|
| **Reactivity** | No hazardous reaction expected under recommended storage and handling conditions. |
| **Chemical stability** | Stable under recommended storage and handling conditions. |
| **Possibility of hazardous reactions** | No hazardous polymerization or other hazardous reaction expected under recommended conditions. |
| **Conditions to avoid** | Excessive heat, thermal decomposition and contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents, sodium hypochlorite and other chlorine-releasing chemicals. |
| **Hazardous decomposition products** | Hydrogen chloride and nitrogen-containing decomposition products may be generated during thermal decomposition. |

## 11. Toxicological Information

**Information on toxicological effects**

The finished mixture has not been tested. Toxicological information and classification are based on available ingredient data, the known formulation and applicable OSHA mixture classification criteria.

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Guanidine hydrochloride | 475 mg/kg (rat) | >2,000 mg/kg (rabbit) | 3.181 mg/L (rat, 4 hours) |

These values relate to guanidine hydrochloride as an ingredient and do not represent experimentally measured toxicity values for the finished mixture.

**Likely routes of exposure and symptoms**

| Route | Potential effects |
|---|---|
| **Inhalation** | Mist or aerosol exposure may cause respiratory irritation. Potential symptoms include coughing and throat discomfort. |
| **Skin contact** | May cause skin irritation, redness and discomfort. |
| **Eye contact** | May cause serious eye irritation, redness, watering and pain. |
| **Ingestion** | Harmful if swallowed. May cause gastrointestinal irritation, nausea and other adverse effects. |

**Immediate, delayed and chronic effects**

Exposure may result in acute skin and eye irritation or harmful effects following ingestion.
The severity of symptoms depends on the route, concentration, extent and duration of exposure.
The mixture has not been fully tested for delayed or chronic toxicological effects.

**Acute toxicity — Oral:** Mixture: Classified as Acute Toxicity Category 4. Harmful if swallowed.
**Skin corrosion/irritation:** Mixture: Classified as Skin Irritation Category 2. Causes skin irritation.
**Serious eye damage/irritation:** Mixture: Classified as Eye Irritation Category 2. Causes serious eye irritation.
**Respiratory or skin sensitization:** Not classified based on available ingredient information.
**Germ-cell mutagenicity:** Not classified based on available ingredient information.
**Carcinogenicity:** Not classified based on available ingredient information. No ingredient present at a relevant concentration is identified as an OSHA-regulated carcinogen.
**Reproductive toxicity:** Not classified based on available ingredient information and intended occupational use.
**Specific target organ toxicity – single exposure:** Not classified.
**Specific target organ toxicity – repeated exposure:** Not classified based on available ingredient information.
**Aspiration hazard:** Not classified.
**Symptoms and effects:** Direct contact may cause skin irritation and serious eye irritation. Ingestion may cause gastrointestinal irritation and harmful systemic effects. Exposure to mist or aerosols may cause respiratory irritation.
**Interactive effects:** No relevant information available.

**Numerical measures of toxicity:** No experimentally determined finished-mixture LD50 or LC50 values are available. The ingredient oral LD50, dermal LD50 and inhalation LC50 values are provided above.
The finished-mixture acute toxicity classification is based on available ingredient toxicity data, the known formulation and applicable OSHA mixture-classification principles.
**Basis of assessment:** Toxicological assessment is based on the complete formulation, available guanidine hydrochloride toxicity data and applicable OSHA Hazard Communication Standard mixture-classification rules.

## 12. Ecological Information

**Ecotoxicity**: The finished mixture has not been experimentally tested for aquatic or terrestrial toxicity.
**Persistence and degradability:** No mixture data available.
**Bioaccumulative potential:** No mixture data available.
**Mobility in soil:** No mixture data available.
**Other adverse effects:** Avoid unnecessary release to the environment.

## 13. Disposal Considerations

**Waste Treatment Methods**
Minimize waste generation wherever practicable.
Dispose of contents and contaminated packaging in accordance with applicable federal, state and local regulations.
Collect chemical waste in suitable, correctly labeled containers.
Do not mix waste containing this product with sodium hypochlorite bleach or chlorine-releasing chemicals.
Avoid uncontrolled discharge to drains, soil or waterways.

**Product**
Dispose of unused product through an appropriately authorized chemical waste disposal service where required.

**Contaminated Packaging**
Empty containers may retain chemical residues.
Dispose of contaminated packaging in accordance with applicable regulations.
Do not reuse containers for food, drink or other incompatible materials.

## 14. Transport Information

**US DOT:** Not regulated
**IATA:** Not regulated
**IMDG:** Not regulated
**Environmental hazards/marine pollutant:** Not identified as a marine pollutant.
**Special precautions:** Transport in securely closed, properly labeled containers. Protect containers against leakage, physical damage and incompatible chemical contact.
**Transport in bulk according to IMO instruments:** Not applicable to supply in laboratory containers.

## 15. Regulatory Information

**U.S. Federal Regulations**

**OSHA Hazard Communication Standard (29 CFR 1910.1200):** This product is classified as a hazardous chemical under the OSHA Hazard Communication Standard.

## 16. Other Information

**Classification basis**
The finished mixture has not been experimentally tested for all hazard endpoints. Classification is based on the known formulation, available ingredient hazard data and applicable OSHA Hazard Communication Standard mixture-classification criteria.

**Key references and sources of data**

Occupational Safety and Health Administration – Hazard Communication Standard, 29 CFR 1910.1200, including Appendices A, B, C and D.
Occupational Safety and Health Administration – Hazard Communication Standard, 2024 Final Rule.
US EPA – Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Applicable US Department of Transportation dangerous goods regulations.

**Date of original preparation:** January 2026
**Date of last revision:** October 2026
**Version:** 02
**Revision summary:** Updated product composition, hazard classification, toxicological information, handling and safety guidance, and regulatory information to align with OSHA HCS 2024 requirements.

**Disclaimer:** The information provided in this SDS is believed to be accurate to the best of the manufacturer's knowledge at the time of preparation. It is intended as a guide to the safe handling, storage and use of the product and is not exhaustive. Users should assess the information in the context of their specific workplace conditions and comply with applicable laws and regulations. For further information, please contact Azora Biosciences.