

SAFETY DATA SHEET

Preparation Date: 05/26/2021

Revision Date:

SECTION 1: Identification

BioReady™ Borate Buffer

Manufacturer: nanoComposix, Inc.
4878 Ronson CT STE K
San Diego, CA 92111-1806

NANOCOMPOSIX CUSTOMER SERVICE: (858) 565-4227
CHEMTREC (EMERGENCY ONLY): (800) 424-9300
POISON CENTER: (800) 562-8236

Relevant Identified Uses: Laboratory chemicals, Manufactured substances

SECTION 2: Hazards Identification

EMERGENCY OVERVIEW:

OSHA Hazards: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Reproductive Toxicity (Category 1B), H360

Eye Irritation (Category 2A), H319

Pictogram



Signal word Danger

HMIS CLASSIFICATION

Health Hazard: 2

Flammability: 0

Physical Hazards: 0

NFPA RATING

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

APPEARANCE: Clear and colorless liquid.

EYE CONTACT: May cause eye irritation. Prolonged exposure may cause eye damage.

SKIN CONTACT: May be harmful if absorbed through skin. May cause skin irritation.

INHALATION: May be harmful if inhaled. May cause respiratory tract irritation.

INGESTION: May be harmful if ingested.

ACUTE HEALTH EFFECTS: May be irritating to skin, eyes and digestive tract.

CHRONIC HEALTH EFFECTS: Repeated and prolonged exposures have not been studied.

AGGRAVATION of PRE-EXISTING CONDITIONS: Persons with preexisting conditions may be more susceptible.

SECTION 3: Composition and Information on Ingredients

CHEMICAL NAME: Borate-Boric Acid buffer solution

CAS REGISTRY NUMBER: NA (See components)

FORMULA: NA (See components)

EINECS NUMBER: NA (See components)

CHEMICAL FAMILY: NA

SYNONYM: Borate buffer solution, BioReady™ Borate buffer

INGREDIENTS	CAS #	% by Mass	Hazardous
Water	7732-18-5	>95	No
Boric Acid	10043-35-3	0 - 0.607	Yes
Sodium tetraborate decahydrate	1303-96-4	0.074 - 3.81	Yes
Sodium Hydroxide	1310-73-2	0 - 0.187	No

SECTION 4: First Aid Measures

PRIMARY ROUTES OF EXPOSURE: Ingestion, dermal contact.

EYE EXPOSURE: Remove contacts if present. Immediately flush the eyes with water for at least 10-15 minutes. Seek medical attention if irritation persists.

SKIN EXPOSURE: Wash the affected area with soap and water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: If breathed in, move person to fresh air. If not breathing, give artificial respiration.

INGESTION: If the person is conscious, rinse their mouth out with water. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: The most important known symptoms and effects are described in section 2 and/or in section 11.

SECTION 5: Fire Fighting Measures

EXTINGUISHING MEDIUM: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus for fire fighting if necessary.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: None.

UNUSUAL FIRE OR EXPLOSION HAZARDS: None.

SECTION 6: Accidental Release Measures

GENERAL PROTECTION: See Section 8 for personal protection. Avoid breathing vapors, mist or gas.

ENVIRONMENTAL PRECAUTIONS: No special environmental precautions required.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP: Small spills can be swept up or diluted flushed with water to dilute according to local, state, and federal disposal guidelines. Solid surface should be wiped with a detergent-based cleaner to clean any remaining materials.

SECTION 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING: Avoid contact with skin, eyes and clothing. Avoid prolonged or repeat exposure.

RECOMMENDED STORAGE: Closed container stored at 2-25°C.

Storage class (TRGS 510): Non-Combustible liquids

SECTION 8: Exposure Controls and Personal Protection

CONTROL PARAMETERS EXPOSURE CONTROLS:

Component	CAS #	Value	Control Parameters	Basis
Sodium Hydroxide	1310-73-2	IDLH	10 mg/m ³	NIOSH
		Ceiling	2 mg/m ³	NIOSH
		Ceiling (Vacated)	2 mg/m ³	OSHA PEL
		TWA	2 mg/m ³	OSHA PEL
		Ceiling	2 mg/m ³	ACGIH Threshold Limit Values (TLV)
Boric acid (H ₂ B ₄ O ₇), disodium salt, decahydrate	1303-96-4	TWA	5 mg/m ³	USA. NIOSH Recommend Exposure Limits
		PEL	5 mg/m ³	California permissible exposure limites for chemical contaminants (Title 8, Article 107)
		TWA	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritations. Not classifiable as a human carcinogen varies.		
		STEL	6 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritations. Not classifiable as a human carcinogen varies.		

APPROPRIATE ENGINEERING CONTROLS: General industrial hygiene practice.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SKIN PROTECTION: Wear protective clothing and gloves.

VENTILATION: None.

RESPIRATOR: Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

ADDITIONAL PROTECTION: No additional protection required.

SECTION 9: Physical and Chemical Properties

FORM:	Liquid.
APPEARANCE/COLOR:	Clear and colorless.
UPPER/LOWER FLAMMABILITY LIMIT:	No data available.
ODOR:	No data available.
VAPOR PRESSURE:	No data available.
ODOR THRESHOLD:	No data available.
VAPOR DENSITY:	No data available.
pH:	8.4 - 9.7
RELATIVE DENSITY:	No data available.
MELTING/FREEZING POINT (°C):	No data available.
SOLUBILITY:	No data available.
BOILING POINT (°C):	No data available.
FLASH POINT (°C):	No data available.
EVAPORATION RATE:	No data available.
FLAMMABILITY:	No data available.
PARTITION COEFFICIENT:	No data available.
AUTO-IGNITION TEMPERATURE (°C):	No data available.
DECOMPOSITION TEMPERATURE (°C):	No data available.
MOLECULAR WEIGHT:	No data available.
VISCOSITY:	No data available.
SPECIFIC GRAVITY:	No data available.

SECTION 10: Stability and Reactivity

REACTIVITY: No data available.

CHEMICAL STABILITY: Stable under recommended storage conditions.

OTHER:

POSSIBILITY OF HAZARDOUS REACTIONS: No data available.

CONDITIONS TO AVOID: No data available.

MATERIALS TO AVOID: No data available.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products may be formed under fire conditions. Nature of decomposition products not known.

SECTION 11: Toxicological Information

ACUTE TOXICITY

Oral LD50: No data available.

Inhalation LD50: No data available.

Dermal LD50: No data available.

Other information on acute toxicity: No data available.

Component Information:

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide	LD50 = 325 mg/kg (Rat)	LD50 = 1350 mg/kg (Rabbit)	Not listed

SKIN CORROSION/IRRITATION: No data available.

SERIOUS EYE DAMAGE/IRRITATION No data available.

RESPIRATORY OR SKIN SENSITIZATION No data available.

GERM CELL MUTAGENICITY No data available.

CARCINOGENICITY

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available

TERATOGENICITY: No data available

SPECIFIC TARGET ORGAN TOXICITY No data available

ASPIRATION HAZARD No data available

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

SIGNS AND SYMPTOMS OF EXPOSURE: The toxicological properties have not been thoroughly investigated. The data supplied are for a closely related compound. No data available.

SYNERGISTIC EFFECTS: No data available.

ADDITIONAL INFORMATION: RTECS not available.

SECTION 12: Ecological Information

AQUATIC/TERRESTRIAL ORGANISM TOXICITY:	No data available.
ASPIRATION HAZARD	No data available.
PERSISTANCE AND DEGRADABILITY:	No data available.
BIOACCUMULATIVE POTENTIAL:	No data available.
MOBILITY IN SOIL:	No data available.
PBT AND vPvB ASSESSMENT:	No data available.
OTHER ADVERSE EFFECTS:	No data available.

SECTION 13: Disposal Considerations

DISPOSAL: Dispose of according to local, state and federal regulations. (Refer to Section 8)

SECTION 14: Transportation Information

DOT (US):	Not dangerous goods.
IMDG:	Not dangerous goods.
IATA:	Not dangerous goods.
SHIPPING NAME (CFR):	Non-hazardous.
SHIPPING NAME (IATA):	Non-hazardous.

SECTION 15: Regulatory Information

OSHA HAZARDS: No known OSHA hazards

DSL STATUS: All components of this product are on the Canadian DSL list

TSCA 8(b) inventory: All ingredients listed in this product are in the TSCA inventory.

SARA 302 COMPONENTS: No chemicals in this material are subject the reporting requirements of SARA Section 302.

SARA 313 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Section 313.

SARA 311/312 HAZARDS: No SARA Hazards.

MA RIGHT TO KNOW COMPONENTS: No components are subject to the MA Right to Know Act.

PA RIGHT TO KNOW COMPONENTS:

INGREDIENTS	CAS #	% by Mass	Hazardous
Water	7732-18-5	>95	No
Boric Acid	10043-35-3	0 - 0.607	Yes
Sodium tetraborate decahydrate	1303-96-4	0.074 - 3.81	Yes
Sodium Hydroxide	1310-73-2	0 - 0.187	No

NJ RIGHT TO NOW COMPONENTS

INGREDIENTS	CAS #	% by Mass	Hazardous
Water	7732-18-5	>95	No
Boric Acid	10043-35-3	0 - 0.607	Yes
Sodium tetraborate decahydrate	1303-96-4	0.074 - 3.81	Yes
Sodium Hydroxide	1310-73-2	0 - 0.187	No

CA PROP 65 COMPONENTS: This product does not contain any chemicals known to the State of CA to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 Other Information

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, nanoComposix, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.