

SAFETY DATA SHEET

Version 1.4

Revision date: Sep 22, 2026



Binding Buffer BB-PM

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier:	Binding Buffer
Product code:	#NBB-PM
Manufacturer's name and address:	Luna Nanotech Inc., 85 Citizen Court, Unit 13 Markham, ON L6G 1A8, Canada
Business telephone number:	1-800-474-4055
Email:	info@lunanano.com
Emergency telephone numbers:	Luna Nanotech Inc. 1-800-474-4055 Available 10:00 a.m. to 6:00 p.m. Eastern Time. This number is not monitored outside these hours.
Product use:	For research use only. Not intended for human or animal diagnostic or therapeutic uses.

SECTION 2: HAZARDS IDENTIFICATION

GHS classification:

Skin irritant: Category 2
Eye irritant: Category 2A

Signal word: Warning

Hazard statements:

H302 + H332: Harmful if swallowed/ inhaled.
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statements:

P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves and eye protection.
P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352: IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313: If skin irritation occurs: Get medical advice/ attention.
P337 + P313: If eye irritation persists: Get medical advice/ attention.
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS classification:

2
Health hazard: 1
Chronic health hazard: 0



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Flammability: 0
Physical hazards:

Potential health effects: Toxic if inhaled. Causes respiratory tract irritation.
Inhalation: May be harmful if absorbed through skin. Causes skin irritation.
Skin: Causes eye irritation.
Eyes: Toxic if swallowed.
Ingestion:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Hazardous ingredients:

Chemical name: Guanidine hydrochloride
CAS number: 50-01-1
EC number: 200-002-3
Concentration: 30 – 50 % w/v

Chemical name: Potassium acetate
CAS number: 127-08-2
EC number: 204-822-2
Concentration: 5 – 10 % w/v

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIREFIGHTING MEASURES

Conditions of flammability: Not flammable or combustible.

Flash point: Not determined.

Means of extinction: Use water spray, alcohol-resistant foam, dry chemical, or CO₂.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Explosion data:

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Sensitivity to mechanical impact: Not sensitive.
Sensitivity of static discharge: Not sensitive.

Hazardous decomposition products formed under fire conditions:

Carbon oxides, Nitrogen oxides (NO_x), Hydrogen chloride gas.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7. HANDLING AND STORAGE

Handling: Wear personal protective equipment. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: If exposure limits are exceeded or irritation is experienced, respiratory protection approved under NIOSH/MSHA must be worn. For high airborne contaminant concentration positive-pressure supplied air respirators may be required.

Eye protection: Wear safety glasses with side shields conforming to EN166. Avoid contact with the eyes.

Skin and body protection: Wear protective gloves and clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Specific engineering controls: Use appropriate mechanical exhaust or laboratory fume hood to avoid exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid
Color: Clear
Odor: Characteristic
Taste: Not available
pH: 4.8
Boiling point: Not available
Melting point: Not available

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Flash point:	Not available
Evaporation rate:	Not available
Explosion limits:	Not available
Specific gravity:	1.13
Vapor pressure:	Not available
Vapor density:	Not available
Volatility:	Not available
Solubility in water:	Not available
Solubility in other solvents:	Not available
Thermal decomposition:	Not available
Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Incompatible products:	Strong oxidizing agents.
Conditions to avoid:	Not available.
Hazardous decomposition products:	Under fire conditions: Carbon oxides, nitrogen oxides, hydrogen chloride gas.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity:	Not available.
Acute inhalation toxicity:	Not available.
Acute dermal toxicity:	Not available.

Ingredients:

Guanidine hydrochloride

LD50 oral rat:	1,120 mg/kg
LD50 dermal rabbit:	2,000 mg/kg

Skin corrosion/irritation

Product:

Corrosive and destructive to tissue. Causes skin burns.

Serious eye damage/eye irritation

Product:

Respiratory or skin sensitization: May cause irreversible eye damage.

Germ cell mutagenicity:

Not available.

Carcinogenicity:

Not available.

Reproductive toxicity:

Not available.

STOT-singe exposure:

Not available.

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STOT-repeated exposure:

Not available.

Aspiration toxicity:

Not available.

Further information:

Not available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Harmful to aquatic organisms.

Toxicity to fish:

Leuciscus idus (Golden orfe) – 1,759 mg/L

Persistence and degradability:

Not readily biodegradable.

SECTION 13: DISPOSAL CONSIDERATIONS

Product:

The product should not be allowed to enter drains, watercourses, or the soil. Disposing should be performed in compliance with local and national regulation by a licensed waste management company.

Contaminated packaging:

Dispose of as unused product. Do not reuse empty containers.

SECTION 14: TRANSPORT INFORMATION

DOT (US):

Not regulated as dangerous good.

UNRTG:

Not regulated as dangerous good.

IATA:

Not regulated as dangerous good.

IMDG:

Not regulated as dangerous good.

SECTION 15: REGULATORY INFORMATION

WHMIS Classification:

D1B

Toxic Material Causing Immediate and Serious Toxic Effects

Toxic by injection

D2B

Toxic Material Causing Other Toxic Effects

Moderate skin irritant
Moderate eye irritant

SECTION 16: OTHER INFORMATION

The above information provided in this Materials Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as a guidance for safe handling, processing, use, transportation, storage, disposal and release. This information 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.

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End of Safety Data Sheet