

SAFETY DATA SHEET

Buffer RL

Section 1. Identification

Product Identifier:	Buffer RL
Product code:	17281, 90054, 90055, 90195, 90233, 90239, 90243, Dx90055, Dx90239, NBRLBUFF-30ML, NBRLBUFF-40ML, T016
Product Type:	Liquid
Supplier's details:	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: techsupport@norgenbiotek.com
Emergency telephone number (with hours of operation):	CHEMTREC U.S. & Canada: 1-800-424-9300

Section 2. Hazard Identification

Classification of the Substance or mixture:	ACUTE TOXICITY (oral) - Category 4 AQUATIC HAZARD(LONG-TERM) -Category 3 ACUTE INHALATION TOXOCITY (DUST AND MIST) Category 4 SERIOUS EYE IRRITATION/DAMAGE - Category 1
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GHS label elements
Hazard Pictograms:



Signal Word: Danger
Hazard Statements: Causes skin and eye irritation
 Harmful if swallowed, in contact with skin or if inhaled

Precautionary statements:

Prevention: Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink, or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear respiratory protection

Response: Immediately call a POISON CENTER or doctor/physician
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting

Section 2. Hazard Identification

Storage: Not applicable.
Disposal: Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture
Other means of identification:

Ingredient name	% (w/w)	CAS number
Guanidine thiocyanate	30-60	593-84-0
Sodium citrate	<5	6132-04-3

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** No known significant effects or critical hazards
- Skin contact:** No known significant effects or critical hazards
- Ingestion:** No known significant effects or critical hazards

Over-exposure signs/symptoms

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** No known significant effects or critical hazards
- Skin contact:** No known significant effects or critical hazards
- Ingestion:** No known significant effects or critical hazards

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

Protection of

first-aiders: No action shall be taken involving any personal risk or without suitable training

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media: Use an extinguishing agent suitable for the surrounding fire

Unsuitable

extinguishing media: None known

Specific hazards

arising from the

chemical:

This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal

decomposition

products:

Decomposition products may include the following materials:

Carbon dioxide

Carbon mono dioxide

Nitrogen oxides

Sulfur oxides

Metal oxides/oxides

Special protective

actions for

fire-fighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective

equipment for

fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For non-emergency

personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up**Small spill:**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage**Precautions for safe handling**

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures

Conditions for safe storage, including incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection**Control parameters****Occupational exposure limits**

None known.

Appropriate engineering controls:

Good general ventilation should be sufficient to control worker exposure to airborne

contaminants.**Environmental****exposure controls:**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures**Hygiene measures:**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection**Hand protection:**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

- Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection:** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance:

- Physical State:** Liquid
- Color:** Colourless
- Odor:** Not available.
- Odor threshold:** Not available.
- pH:** 7
- Melting point/
freezing point:** Not applicable.
- Boiling point, initial
boiling point, and
boiling range:** Not available.
- Flash point:** Not applicable.
- Evaporation rate:** Not available.
- Flammability:** Not available.
- Lower and upper
explosion limit/
flammability limit:** Not available.
- Vapor pressure:** Not available.
- Relative vapor
density:** Not available.
- Relative density:** Not available.
- Solubility:** Miscible in water.
- Partition coefficient:** Not applicable.

n-octanol/water

Auto-ignition

temperature: Not available.

Decomposition

temperature: Not available.

Viscosity: Not available.

Flow time

(ISO 2431): Not available.

Particle characteristics

Median particle size: Not applicable.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of

hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible

materials: Reactive or incompatible with the following materials; oxidizing materials, acids and alkalies.

Hazardous

decomposition

products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicology information

Information on toxicology effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Guanidine Thiocyanate	LD50 oral	Rat	593 mg/kg	-

Irritation/Corrosion

There is no data available

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

**Information on the
likely routes of**

exposure: Oral, dermal or inhalation

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: No known significant effects or critical hazards

Delayed and immediate effects and chronic effects from short- and long-term exposure

Short term exposure

Potential immediate

effects: No known significant effects or critical hazards

Potential delayed

effects: No known significant effects or critical hazards

Long term exposure

Potential immediate

effects: No known significant effects or critical hazards

Potential delayed

effects: No known significant effects or critical hazards

Potential chronic health effects

General: No known significant effects or critical hazards

Carcinogenicity: No known significant effects or critical hazards

Mutagenicity: No known significant effects or critical hazards

Reproductive

toxicity: No known significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Guanidine thiocyanate	593	1100	N/A	11	N/A
Buffer RL	1254.5	2327.1	N/A	23.3	N/A

Section 12. Ecological information

Toxicity

There is no available data

Persistence and degradability

There is no data available.

Mobility in soil

Soil/water partition

coefficient (K_{oc}): Not available.

Other adverse effects: No known significant effect or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration

or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TGD Classification	DOT Classification (US)	IMGD	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG: Not applicable.

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments:

Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI: None of the components are listed

CEPA Toxic substances: None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

Inventory list

Canada: All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date

of revision: 07/12/2024

Date of previous

issue: 12/15/2021

Version: 00

Prepared by: Norgen Biotek Corp.

Key to abbreviations: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogP_{OW} = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
AQUATIC HAZARD(LONG-TERM) -Category 3	Calculation method
ACUTE INHALATION TOXOCITY (DUST AND MIST) Category 4	Calculation method
SERIOUS EYE IRRITATION/DAMAGE - Category 1	Calculation method

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Column Activation Buffer

Section 1. Identification

Product Identifier: Column Activation Buffer
Product code: 17503, T009
Product Type: Liquid

Supplier's details: Norgen Biotek Corporation
3430 Schmon Parkway
Thorold, ON
Canada L2V 4Y6
Tel: (905) 227-8848
Fax: (905) 227-1061
Toll Free: 1-866-667-4362
E-mail: techsupport@norgenbiotek.com

Emergency telephone number (with hours of operation): CHEMTREC
U.S. & Canada: 1-800-424-9300

Section 2. Hazard Identification

Classification of the Substance or mixture: Not applicable

GHS label elements
Hazard Pictograms: Not applicable

Signal Word: Not applicable
Hazard Statements: Not applicable

Precautionary statements:
Prevention: Not applicable

Response:

Storage: Not applicable.
Disposal: Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification:

Ingredient name	% (w/w)	CAS number
Ammonium bicarbonate	<10	1066-33-7

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** No known significant effects or critical hazards
- Skin contact:** No known significant effects or critical hazards
- Ingestion:** No known significant effects or critical hazards

Over-exposure signs/symptoms

Eye contact: No known significant effects or critical hazards
Inhalation: No known significant effects or critical hazards
Skin contact: No known significant effects or critical hazards
Ingestion: No known significant effects or critical hazards

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.No specific treatment.

Protection of

first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media: Use an extinguisher agent suitable for the surrounding fire

Unsuitable

extinguishing media:None known

Specific hazards

arising from the

chemical: No specific fire or explosion hazard.

Hazardous thermal

decomposition

products: Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

Special protective

actions for

fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective

equipment for

fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill:

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor

Large spill:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use

Section 8. Exposure controls/personal protection**Control parameters****Occupational exposure limits**

No exposure limit value known for this concentration

Appropriate engineering

controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental

exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin

protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance:
Physical State: Liquid
Color: Not available.
Odor: Not available.
Odor threshold: Not available.
pH: 7.7
**Melting point/
freezing point:** Not applicable.
**Boiling point, initial
boiling point, and
boiling range:** Not available.
Flash point: Not applicable.
Evaporation rate: Not available.
Flammability: Not available.
**Lower and upper
explosion limit/
flammability limit:** Not available.
Vapor pressure: Not available.
**Relative vapor
density:** Not available.
Relative density: Not available.
Solubility: Miscible in water.
**Partition coefficient:
n-octanol/water** Not applicable.
**Auto-ignition
temperature:** Not available.
**Decomposition
temperature:** Not available.
Viscosity: Not available.
**Flow time
(ISO 2431):** Not available.
Particle characteristics
Median particle size: Not applicable.

Section 10. Stability and reactivity

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Reactive or incompatible with the following materials; oxidizing materials, acids and alkalies.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicology information

Information on toxicology effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure:

Oral
Dermal
Inhalation

Potential acute health effects

Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards
Ingestion: No known significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: Adverse symptoms may include the following:
pain or irritation
watering
redness
Inhalation: No known significant effects or critical hazards
Skin contact: No known significant effects or critical hazards
Ingestion: No known significant effects or critical hazards

Delayed and immediate effects and chronic effects from short- and long-term exposure

Short term exposure

Potential immediate effects: No known significant effects or critical hazards
Potential delayed effects: No known significant effects or critical hazards

Long term exposure

Potential immediate effects: No known significant effects or critical hazards
Potential delayed effects: No known significant effects or critical hazards

Potential chronic health effects

General: No known significant effects or critical hazards
Carcinogenicity: No known significant effects or critical hazards
Mutagenicity: No known significant effects or critical hazards
Reproductive toxicity: No known significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Mobility in soil

Soil/water partition

coefficient (K_{oc}): Not available.

Other adverse effects: No known significant effect or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TGD Classification	DOT Classification (US)	IMGD	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG: Not applicable.

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI: None of the components are listed
CEPA Toxic substances: None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

Inventory list

Canada: All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date

of revision: 07/23/2024

Date of previous

issue: 12/15/2021

Version: 00

Prepared by: Norgen Biotek Corp.

Key to abbreviations: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)
SGG = Segregation Group

UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Elution Buffer F

Section 1. Identification

Product Identifier: Elution Buffer F
Product code: 90015, 90016, 90181, NBELBUFFF-15ML
Product Type: Liquid

Supplier's details: Norgen Biotek Corporation
3430 Schmon Parkway
Thorold, ON
Canada L2V 4Y6
Tel: (905) 227-8848
Fax: (905) 227-1061
Toll Free: 1-866-667-4362
E-mail: techsupport@norgenbiotek.com

Emergency telephone number (with hours of operation): CHEMTREC
U.S. & Canada: 1-800-424-9300

Section 2. Hazard Identification

Classification of the Substance or mixture: Not a dangerous substance or mixture

GHS label elements
Hazard Pictograms: Not a dangerous substance or mixture

Signal Word: Not a dangerous substance or mixture
Hazard Statements: Not a dangerous substance or mixture

Precautionary statements:
Prevention: Not applicable

Response: Not applicable

Storage: Not applicable.

Disposal: Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of

identification: THAM Tris (hydroxymethyl) amino methane, Trisamine, Trimethylol amino methane, Trisaminol, TRIS, 2-Amino-2-(hydroxymethyl)-1,3-propanediol, 1,1,1-Tris(hydroxy methyl) Methyl amine, Tromethamol

Ingredient name	% (w/w)	CAS number
Trimethylol amino methane	<0.2	77-86-1
Hydrochloric Acid	<0.02	7647-01-0

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Over-exposure signs/symptoms

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Indication of immediate medical attention and special treatment needed, if necessary

Data not available.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media: Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam.

Unsuitable

extinguishing media: Carbon oxides, nitrogen oxides, hydrogen chloride gas

Specific hazards

arising from the

chemical:

Not available

Hazardous thermal

decomposition

products:

Not available

Special protective
actions for

fire-fighters:

Not available

Special protective
equipment for

fire-fighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For non-emergency

personnel:

Not available

For emergency

responders:

Not available

Environmental

precautions:

Not available

Methods and materials for containment and cleaning up

Clean up spills immediately, observing precautions in the safety data sheet and label. Dispose into chemical waste container

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Use with adequate ventilation as necessary or desired

Advice on general occupational hygiene:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse

Conditions for safe storage, including incompatibilities:

Not available

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Hydrochloric Acid	5ppm/7.5mg/m ³

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not let product enter drains.

Individual protection measures

Hygiene measures: If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario

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

Skin protection

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Other skin

protection: Not applicable

Respiratory

protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance:

Physical State: Liquid
Color: Clear
Odor: Not available.
Odor threshold: Not available.
pH: 9-11
**Melting point/
freezing point:** Not applicable.
**Boiling point, initial
boiling point, and
boiling range:** Not available.
Flash point: Not applicable.
Evaporation rate: Not available.
Flammability: Not available.
**Lower and upper
explosion limit/
flammability limit:** Not available.
Vapor pressure: Not available.
**Relative vapor
density:** Not available.
Relative density: Not available.
Solubility: Miscible in water.
Partition coefficient: Not applicable.
**n-octanol/water
Auto-ignition
temperature:** Not available.
**Decomposition
temperature:** Not available.
Viscosity: Not available.
**Flow time
(ISO 2431):** Not available.
Particle characteristics
Median particle size: Not applicable.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicology information

Information on toxicology effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
--	-	-	-	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	-	-	-	-	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

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..

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure:

There is no data available.

Potential acute health effects

Eye contact: There is no data available.

Inhalation: There is no data available.

Skin contact: There is no data available.

Ingestion: There is no data available.

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: There is no data available.

Inhalation: There is no data available.

Skin contact: There is no data available.

Ingestion: There is no data available.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Short term exposure

Potential immediate

effects: There is no data available.

Potential delayed

effects: There is no data available.

Long term exposure

Potential immediate

effects: There is no data available.

Potential delayed

effects: There is no data available.

Potential chronic health effects

General: There is no data available.

Carcinogenicity: There is no data available.

Mutagenicity: There is no data available.

Reproductive

toxicity: There is no data available.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
-	-	-	-

Persistence and degradability

There is no data available.

Product/ingredient name	LogPow	BCF	Potential
-	-	-	-

Mobility in soil

Soil/water partition coefficient (K_{oc}):

Not available.

Other adverse effects:

No known significant effect or critical hazards.

Section 13. Disposal considerations

Disposal methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TGD Classification	DOT Classification (US)	IMGD	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-

Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG: Not applicable.

Special precautions for user:

Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments:

Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI: The following components are listed: Trimethylol amino methane, Hydrochloric Acid

CEPA Toxic substances: None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Inventory list

Canada: All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date

of revision: 07/11/2024
Date of previous issue: 12/15/2021
Version: 00
Prepared by: Norgen Biotek Corp.
Key to abbreviations: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogP_{ow} = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not a dangerous substance or mixture	-

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Wash Solution A

Section 1. Identification

Product Identifier:	Wash Solution A
Product code:	17282, 24121, 28369, 90025, 90026, 90027, 90028, 90189, 90196, 90240, 90242, Dx90026, Dx90028, Dx90240, Dx90242, NBWASHA-18ML, NBWASHA-38ML
Product Type:	Liquid
Supplier's details:	Norgen Biotek Corporation 3430 Schmon Parkway Thorold, ON Canada L2V 4Y6 Tel: (905) 227-8848 Fax: (905) 227-1061 Toll Free: 1-866-667-4362 E-mail: techsupport@norgenbiotek.com
Emergency telephone number (with hours of operation):	CHEMTREC U.S. & Canada: 1-800-424-9300

Section 2. Hazard Identification

Classification of the Substance or mixture:	Not a dangerous substance or mixture.
<u>GHS label elements</u>	
Hazard Pictograms:	Not a dangerous substance or mixture.
Signal Word:	Not a dangerous substance or mixture.
Hazard Statements:	Not a dangerous substance or mixture.
<u>Precautionary statements:</u>	
Prevention:	
Response:	Not a dangerous substance or mixture.
Storage:	Not applicable.
Disposal:	Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification:

Ingredient name	% (w/w)	CAS number
EDTAdisodium salt (Ethylenedinitrilo)tetraacetic aciddisodium salt	<2	6381 - 92 - 6
Trimethylol amino methane	<2	77-86-1
Hydrochloric Acid	<2	7647-01-0

Ranges id listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact:** Not applicable
- Inhalation:** Not applicable

Skin contact: Not applicable
Ingestion: Not applicable

Over-exposure signs/symptoms

Eye contact: Not applicable
Inhalation: Not applicable
Skin contact: Not applicable
Ingestion: Not applicable

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Not applicable
Specific treatments: Not applicable
Protection of first-aiders: Not applicable

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable

extinguishing media: For this substance/mixture no limitations of extinguishing agents are given

Specific hazards arising from the chemical:

Not combustible. Ambient fire may liberate hazardous vapors.

Hazardous thermal decomposition

products:

Nature of decomposition products not known

Special protective actions for fire-fighters:

equipment for fire-fighters:

Prevent fire extinguishing water from contaminating surface water or the ground water system

equipment for fire-fighters:

In the event of fire, wear self-contained breathing apparatus

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel:

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert

For emergency

responders: Not available
Environmental precautions: Do not let product enter drains

Methods and materials for containment and cleaning up

Small spill: Use inert material such as sand or earth to contain spill or leak Absorb spills with chemical absorbent or vermiculite and dispose of in accordance with local regulations. .
Large spill: Do not let product enter drains.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Avoid prolonged or repeated exposure.

Advice on general occupational

hygiene: Do not get in eyes, on skin, on clothing

Conditions for safe storage, including incompatibilities:

Store sealed in original container in a cool well ventilated situation away from foods and other chemicals. Do not store in direct sunlight. Observe good hygiene and housekeeping practices.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

No data available

Appropriate engineering

controls: Not required with normal use.

Environmental

exposure controls: Not required with normal use.

Individual protection measures

Hygiene measures: Do not eat drink or smoke when handling product.

Eye/face protection: Use face shield, chemical goggles or safety glasses with side shield protection

Skin protection

Hand protection: Use of nitrile or neoprene gloves when handling.

Body protection:

Other skin

protection: Not required with normal use

Respiratory

protection: Not required with normal use

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance:

Physical State:	Liquid
Color:	Colorless
Odor:	Not available.
Odor threshold:	Not available.
pH:	Not available.
Melting point/ freezing point:	Not applicable.
Boiling point, initial boiling point, and boiling range:	Not available.
Flash point:	Not applicable.
Evaporation rate:	Not available.
Flammability:	Not available.
Lower and upper explosion limit/ flammability limit:	Not available.
Vapor pressure:	Not available.
Relative vapor density:	Not available.
Relative density:	Not available.
Solubility:	Miscible in water.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Flow time (ISO 2431):	Not available.
<u>Particle characteristics</u>	
Median particle size:	Not applicable.

Section 10. Stability and reactivity

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible	

materials: Reactive or incompatible with the following materials; oxidizing materials, acids and alkalis.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicology information

Information on toxicology effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure:

There is no data available.

Potential acute health effects

Eye contact: There is no data available.
Inhalation: There is no data available.
Skin contact: There is no data available.
Ingestion: There is no data available.

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: There is no data available.
Inhalation: There is no data available.
Skin contact: There is no data available.
Ingestion: There is no data available.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Short term exposure

Potential immediate effects: There is no data available.
Potential delayed effects: There is no data available.

Long term exposure

Potential immediate effects: There is no data available.
Potential delayed effects: There is no data available.

Potential chronic health effects

General: There is no data available.
Carcinogenicity: There is no data available.
Mutagenicity: There is no data available.
Reproductive toxicity: There is no data available.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{oc}): Not available.

Other adverse effects: No known significant effect or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TGD Classification	DOT Classification (US)	IMGD	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG: Not applicable.

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments:

Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI: None of the components are listed.

CEPA Toxic substances: None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II, & III Chemicals

Not listed

Montreal Protocol

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Inventory list

Canada: All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date

of revision: 07/15/2024

Date of previous

issue: 12/15/2021

Version: 00

Prepared by: Norgen Biotek Corp.

Key to abbreviations: ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HPR = Hazardous Products Regulations

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogP_{ow} = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (Marpol = marine pollution)

SGG = Segregation Group

UN = United Nations

Procedure used to derive the classification

None of the components are classified.

Notice to reader

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