

SAFETY DATA SHEET Buffer TN

Section 1. Identification

Product Identifier: Product code: Product Type:	Buffer TN 90086, 90088, 90087 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	CHEMTREC

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 ORAL TOXICITY -Category 4
	ACUTE INHALATION TOXICITY - Category 4
	SKIN CORROSIVE/IRRITATION - Category 3
	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
	SPECIFIC TARGET ORAGN TOXICITY (SINGLE EXPOSURE)
	TARGET ORGANS - CENRTAL NERVOUS SYSTEM (CNS)
	COMBUSTABLE DUST - YES
<u>GHS label elements</u>	
Hazard Pictograms:	

Warning

Signal Word:



Hazard Statements:	H302 + H332 Harmful if swallowed or if inhaled. H315 Causes skin irritation. H319 Causes serious eye irritation.
	H402 Harmful to aquatic life.
Precautionary Statements	1
Prevention:	P261 Avoid breathing dust.
	P264 Wash skin thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P271 Use only outdoors or in a well-ventilated area.
	P273 Avoid release to the environment.
	P280 Wear protective gloves/ eye protection/ face protection.
Response:	P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/
	doctor 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/ doctor 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.
	P362 + P364 Take off contaminated clothing and wash it before reuse.
	P501 Dispose of contents/ container to an approved waste disposal plant
Storage:	Not applicable.
Disposal:	P501 Dispose of contents and container to an approved waste disposal
	plant.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture Other means of identification:

Ingredient name	% (w/w)	CAS number
Guanidine Hydrochloride	10-50	50-10-1
Potassium acetate	2-15	127-08-2

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.

First - Aid response

Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15
	minutes. Get medical attention.
Inhalation:	Remove to fresh air. Get medical attention immediately if symptoms occur. If not
	breathing, give artificial respiration
Skin contact:	Wash off immediately with plenty of water for at least 15 minutes. Get medical
	attention immediately if symptoms occur
Ingestion:	Do NOT induce vomiting. Get medical attention.

Over-exposure signs/symptoms

Eye contact:	Irritation, redness, watering
Inhalation:	No data available
Skin contact:	Irritation, redness
Ingestion:	Drowsiness, dizziness, stomach pain, gastrointestinal issues

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

Notes to physician:	Treat symptomatically
Specific treatments:	No specific treatments
Protection of	
first-aiders:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).



Section 5. Fire-fighting measures

Extin	guishing	media

Suitable optinguish	
Suitable extinguishi	
media:	Water spray
	Alcohol-resistant foam
	Carbon dioxide
	Dry Chemicals
Unsuitable	
extinguishing media	a: None known
Specific hazards	
arising from the	
chemical:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.
Hazardous thermal	1 1
decomposition	
products:	Carbon oxides
F	Nitrogen oxides (NOx)
	Chlorine compounds
	Metal oxide
Q	
Special protective actions for	
fire-fighters:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures		
For non-emergency		
personnel:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).	
Environmental precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water	



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 saf	fe handling	

Trecautions for sure numaning		
Protective measures: Work under hood. Do not inhale substance/mixture.		
Advice on general		
occupational		
hygiene:	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.	
Conditions for safe	wash hands and face after working with substance.	
storage, including		
incompatibilities:	Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Store	
	in doors.Incompatible Materials. Strong oxidizing agents.	

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Guanidine Hydrochloride	600 ug/m^3

Appropriate engineering

controls:	Ensure adequate ventilation, especially in confined areas. Minimize workplace
	exposure concentrations. Apply measures to prevent dust explosions. Ensure that
	dust-handling systems (such as exhaust ducts, dust collectors, vessels, and
	processing equipment) are designed in a manner to prevent the escape of dust into
	the work area (i.e., there is no leakage from the equipment)
Environmental	
exposure controls:	No information available



Individual protection measures

Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.	
Eye/face protection:	: Wear appropriate protective eyeglasses or chemical safety goggles as described	
	OSHA's eye and face protection regulations in 29 CFR 1910.133 or	
	EuropeanStandardEN166.	
Skin protection		
Hand protection:	Wear appropriate protective gloves to prevent contact with skin.	
Body protection:	Wear clothes that appropriately cover exposed areas of the body to avoid contact with the body	
Other skin		
protection:	Not applicable	
Respiratory		
protection:	No protective measures under normal conditions while working in a well ventilated area.	

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.

<u>Appearance:</u>	
Physical State:	Liquid
Color:	No t available
Odor:	Not available.
Odor threshold:	Not available.
pH:	4-6
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.



Decompositiontemperature:Not available.Viscosity:Not available.Flow timeImage: State of the state of th

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
	LD50 Oral	Rat	475 mg/kg	-
Guanidine Hydrochloride	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LC50 Inhalation	Rat	3.2 mg/L	4h
Potassium Acetate	LD50 Oral	Rat	3250 mg/kg	-
	LD50 Dermal	Rabbit	>20000 mg/kg	-

Irritation/Corrosion

There is no data available. <u>Sensitization</u> There is no data available. <u>Mutagenicity</u> There is no data available. <u>Carcinogenicity</u> 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, eyes, inhalation

Potential acute health effects

Eye contact:	Irritation, redness, watering
Inhalation:	Not data available
Skin contact:	Irritation, redness, rash
Ingestion:	Gastrointestinal issues, vomiting, pain,

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact:	Not data available
Inhalation:	Not data available
Skin contact:	Not data available
Ingestion:	Not data available

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

Short term exposure	
Potential immediate	
effects:	Not data available
Potential delayed	
effects:	Damage to the central nervous system
Long term exposure	
Potential immediate	
effects:	Not data available
Potential delayed	
effects:	Damage to the central nervous system
Potential chronic health effects	
General:	Damage to the central nervous system



Carcinogenicity:	Not data available
Mutagenicity:	Not data available
Reproductive	
toxicity:	Not data available

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Guanidine Hydrochloride	70.2 mg/l	Daphnia	48h
	33.5 mg/l	Algae	72h
	7125 mg/l	Bacteria	18h
	181 mg/l	Fish (chronic)	35days
	2.9 mg/l	Daphnia (chronic)	21days

Persistence and degradability

There is no data available.

<u>Mobility in soil</u> Soil/water partition

pur pur dition	
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	No.	No.	No.	No.
hazards				

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

<u>Canadian lists</u>	
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

<u>Inventory list</u> Canada:

All components are listed or exempted.

Section 16. Other information

History Date of issue/Date of revision: 07/19/2024



Date of previous	
issue:	12/15/2021
Version:	00
Prepared by:	Norgen Biotek Corp.
Key to abbreviations:	ATE = Acute Toxicity Estimate
	BCF = Bio-concentration Factor
	GHS = Globally Harmonized System of Classification and Labeling of
	Chemicals
	HPR = Hazardous Products Regulations
	IATA = International Ait 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

All classifications were determined using calculation methods

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 J

Section 1. Identification

Product Identifier: Product code: Product Type:	Elution Buffer J 90001, 90002 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	CHEMTREC

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: Hazard Statements:	Not a dangerous substance or mixture Not a dangerous substance or mixture
<u>Precautionary statements:</u> 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	ng
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
 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.EnvironmentalDo 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: Body 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. 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: Respiratory	Not applicable



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:

1 ppcul uncel	
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 characterist	
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
	-	-	-	-

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 ofexposure: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.

<u>Delayed and immediate effects and chronic effects from short- and long-term exposure</u> <u>Short term exposure</u>

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

Long term exposure

Potential immediateeffects:There is no data available.Potential delayedThere is no data available.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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
-	-	-	- (ppm)	-	-

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
-	-	-	-

<u>Mobility in soil</u> Soil/water partition	
coefficient (Koc):	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	No.	No.	No.	No.
hazards				

AERG:	Not applicable.
Special precautions	Transmission of the second sec
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

<u>History</u>	
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 Ait 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

Lysis Buffer N

Section 1. Identification

Product Identifier: Product code: Product Type:	Lysis Buffer N 90114, 90115, 90230 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	CHEMTREC

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: Hazard Statements:	Not a dangerous substance or mixture Not a dangerous substance or mixture
<u>Precautionary statements:</u> 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:

Ingredient name	% (w/w)	CAS number
Sodium dodecyl sulfate	2.4	151-21-3
Sodium Chloride	<5	7647-14-5

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

Description of neces	ssary mist and 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
C	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 medi	
Suitable extinguishi	ng
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:	None known
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:	Ensure adequate ventilation. Use personal protective equipment as required.
For emergency	
responders:	Not available
Environmental	
precautions:	Should not be released into the environment.Dispose of the material following local, regional or international regulations.

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

Appropriate engineering

controls:Handle in accordance with good industrial hygiene and safety practice.EnvironmentalDo not let product enter drains.

Individual protection measures

individual protection	
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: Respiratory	Not applicable
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: Not available 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** Not available. density: **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

A 4	
Acute	toxicity
1 ICUIC	UDAICIU

Product/ingredient name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Dodecyl Sulfate	1288 mg/kg (Rat)	>2000 mg/kg (Rabbit)	>3900 mg/m ³ (Rat) 1h

Irritation/Corrosion

No information available <u>Sensitization</u> There is no data available. <u>Mutagenicity</u> There is no data available. <u>Carcinogenicity</u> 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. <u>Aspiration hazard</u> There is no data available. Information on the



likely routes ofexposure:There are no significant effects or hazards.

Potential acute health effects

Eye contact:	There are no significant effects or hazards
Inhalation:	There are no significant effects or hazards
Skin contact:	There are no significant effects or hazards.
Ingestion:	There are no significant effects or hazards

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact:	There are no significant effects or hazards.
Inhalation:	There are no significant effects or hazards
Skin contact:	There are no significant effects or hazards.
Ingestion:	There are no significant effects or hazards.

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

Short term exposure

Potential immediate	
effects:	There are no significant effects or hazards.
Potential delayed	
effects:	There are no significant effects or hazards.

Long term exposure

Potential immediate

effects:	There are no significant effects or hazards.
Potential delayed	
effects:	There are no significant effects or hazards.

Potential chronic health effects

General:	There are no significant effects or hazards.
Carcinogenicity:	There are no significant effects or hazards.
Mutagenicity:	There are no significant effects or hazards.
Reproductive	
toxicity:	There are no significant effects or hazards.

<u>Numerical measures of toxicity</u> <u>Acute toxicity estimates</u>

There is not data available



Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
	LC50 7650 mg/L	Fish	96h
Sodium Chloride	EC50 1000 mg/L	Water Flea	48h
	LC50 22.5 mg/L	Fish	96h
Sodium dodecyl sulfate	EC50 15.6 mg/L	Algae	96h
	EC50 1.8 mg/L	Water Flea	48h

Persistence and degradability

There is no data available.

Mobility in soil	
Soil/water partition	
coefficient (Koc):	No data 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	No.	No.	No.	No.
hazards				

AERG: Special precautions	Not applicable.
	Transport within user's promises always transport in closed containers that
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.
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

<u>Inventory list</u>

Canada: All components are listed or exempted.

Section 16. Other information

<u>History</u>



Date of issue/Date of revision: Date of previous	07/12/2024
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 Ait 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.

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SAFETY DATA SHEET

Resuspension Solution AZ

Section 1. Identification

Product Identifier: Product code: Product Type:	Resuspension Solution AZ 90120, 90123, 90124, 90125, 90126 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	CHEMTREC

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: Hazard Statements:	Not a dangerous substance or mixture. Not a dangerous substance or mixture.
<u>Precautionary statements:</u> Prevention:	
Response:	Not a dangerous substance or mixture.
Storage: Disposal:	Not applicable. 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
Trime ether le l'empire en etherne	-5	77.96.1
Trimethylol amino methane	<5	77-86-1
Hydrochloric Acid	<5	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
0	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.
	6 6,,,

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 applicableSpecific treatments:Not applicableProtection ofImage: Specific treatment in the specific

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

Sultable extinguishing	" 5
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:	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 proceduresFor non-emergencypersonnel: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

<u>Precautions for safe handling</u> 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.

otherwise indicated.		
Appearance:		
Physical State:	Liquid	
Color:	Clolorless	
Odor:	Not available.	
Odor threshold:	Not available.	
рН:	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:	Not applicable.	
n-octanol/water		
Auto-ignition		
temperature:	Not available.	
Decomposition		
temperature:	Not available.	
Viscosity:	Not available.	
Flow time	XT 11 1 1	
(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: Incompatible	No specific data.
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.

<u>Irritation/Corrosion</u> There is no data available.

<u>Sensitization</u> There is no data available.

<u>Mutagenicity</u> There is no data available.

<u>Carcinogenicity</u> There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available. <u>Specific target organ toxicity (single exposure)</u> There is no data available.

<u>Specific target organ toxicity (repeated exposure)</u> There is no data available.

<u>Aspiration hazard</u> There is no data available.

Information on thelikely routes ofexposure: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.

<u>Mobility in soil</u> Soil/water partition coefficient (K₀c):	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	DOT Classification	IMGD	IATA
	Classification	(US)		
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper	-	-	-	-
shipping name				
Transport	-	-	-	-
hazard				
class(es)				
Packing group	-	-	-	-
Environmental	No.	No.	No.	No.
hazards				

AERG:	Not applicable.
Special precautions for user:	Transport within user's premises: always transport in closed containers that
101 user.	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

<u>Canadian lists</u>	
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

<u>Inventory list</u> Canada:

All components are listed or exempted.

Section 16. Other information

<u>History</u>	
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 Ait 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

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

RNase A

Section 1. Identification

Product Identifier: Product code:	RNasae A 17804, 26203, 26208. 26243, 26260, 26270, 26902, 26908, 28354, 500777, 51106, DNB400A-8500UN, Dx15318
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: <u>techsupport@norgenbiotek.com</u>
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: Hazard Statements:	Not a dangerous substance or mixture Not a dangerous substance or mixture
<u>Precautionary statements:</u> Prevention:	Not applicable
Response: Storage: Disposal:	Not applicable Not applicable. Not applicable.



Section 3. Composition/information on ingredients

Substance/mixture: Mixture Other means of identification:

Ingredient name	% (w/w)	CAS number
Nuclease free water	>98	7732-18-5

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

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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 Not applicable.

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	:No unsuitable extinguishing media			
Specific hazards				
arising from the				
chemical:	Not applicable			
Hazardous thermal				
decomposition				
products:	Not applicable			
Special protective				
actions for				
fire-fighters:	Not applicable			
Special protective				
equipment for				
fire-fighters:	Not applicable			

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For non-emergencypersonnel:Not applicable.For emergencyresponders:Not applicableEnvironmentalprecautions:Not applicable

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 handlingProtective measures: Not applicableAdvice on generaloccupationalhygiene:Not applicableConditions for safestorage, includingincompatibilities:Not applicable

Section 8. Exposure controls/personal protection

<u>Control parameters</u> Occupational exposure limits			
Not applicable			
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: Respiratory	Not applicable
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:	Not available
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 characterist	
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

T			
Information on tox Acute toxicity	icology effects		
Not applicable			
Irritation/Corrosio	n		
No information avail			
Sensitization			
There is no data avai	ilable.		
Mutagenicity			
There is no data avai	ilable.		
Carcinogenicity			
-	is product present at levels greater than or equal to 0.1% is identified as probable,		
-	d human carcinogen by IARC		
Reproductive toxic			
There is no data avai	ilable.		
Teratogenicity			
There is no data avai	ilable.		
Specific target orga	<u>in toxicity (single exposure)</u>		
There is no data avai	ilable.		
Specific target orga	<u>in toxicity (repeated exposure)</u>		
There is no data avai	There is no data available.		
Aspiration hazard			
There is no data avai	ilable.		
Information on the			
likely routes of			
exposure:	There is no data available.		
Potential acute health effects			
Eye contact:	There is no significant hazard.		
Inhalation:	There is no significant hazard.		
Skin contact:	There is no significant hazard		
Ingestion:	There is no significant hazard.		
8-*******			



Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact:	There is no significant hazard.
Inhalation:	There is no significant hazard.
Skin contact:	There is no significant hazard.
Ingestion:	There is no significant hazard.

<u>Delayed and immediate effects and chronic effects from short- and long-term exposure</u> Short term exposure

Short term exposure	·
Potential immediate	
effects:	There is no significant hazard.
Potential delayed	
effects:	There is no significant hazard.

Long term exposure

Potential immediate						
effects:	There	e is no	sig	nifica	ant haz	ard
Potential delayed						
66 A	T 1	•		• •	. 1	1

effects: There is no significant hazard..

Potential chronic health effects

General:	There is no significant hazard.
Carcinogenicity:	There is no significant hazard.
Mutagenicity:	There is no significant hazard.
Reproductive	
toxicity:	There is no significant hazard.

Numerical measures of toxicity

Acute toxicity estimates

There is not data available

Section 12. Ecological information

Toxicity	
Not applicable	
Persistence and degradabili	i <u>ty</u>
There is no data available.	
<u>Mobility in soil</u>	
Soil/water partition	
coefficient (Koc):	No data 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	No.	No.	No.	No.
hazards				

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. 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

<u>History</u>	
Date of issue/Date	
of revision:	07/24/2024
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 Ait 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 J

Section 1. Identification

Product Identifier: Product code:	Wash Solution J 90047
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: <u>techsupport@norgenbiotek.com</u>
Emergency telephone	CHEMTREC

of operation):

number (with hours 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: Hazard Statements:	Not a dangerous substance or mixture. Not a dangerous substance or mixture.
<u>Precautionary statements:</u> Prevention:	
Response:	Not a dangerous substance or mixture.
Storage: Disposal:	Not applicable. 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	<5	77-86-1
Hydrochloric Acid	<5	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
0	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.
	6 6,,,

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 applicableSpecific treatments:Not applicableProtection ofImage: Mathematical stress in the stres

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

*5
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
For this substance/mixture no limitations of extinguishing agents are given
Not combustible. Ambient fire may liberate hazardous vapors.
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Nature of decomposition products not known
Prevent fire extinguishing water from contaminating surface water or the ground water system
- -
In the event of fire, wear self-contained breathing apparatus

Section 6. Accidental release measures

Personal precautions, protective equipment, and emergency proceduresFor non-emergencypersonnel: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

<u>Precautions for safe</u> Protective measures Advice on general	handling Avoid prolonged or repeated exposure.
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.

otherwise indicated.	
Appearance:	
Physical State:	Liquid
Color:	Clolorless
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:	Not applicable.
n-octanol/water	
Auto-ignition	
temperature:	Not available.
Decomposition	
temperature:	Not available.
Viscosity:	Not available.
Flow time	
(ISO 2431):	Not available.
Particle characterist	
Median particle sizes	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: Incompatible	No specific data.
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.

<u>Irritation/Corrosion</u> There is no data available.

<u>Sensitization</u> There is no data available.

<u>Mutagenicity</u> There is no data available.

<u>Carcinogenicity</u> There is no date evailable

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available. <u>Specific target organ toxicity (single exposure)</u> There is no data available.

<u>Specific target organ toxicity (repeated exposure)</u> There is no data available.

<u>Aspiration hazard</u> 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.

<u>Mobility in soil</u> 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	IMGD	IATA
	Classification	(US)		
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper	-	-	-	-
shipping name				
Transport	-	-	-	-
hazard				
class(es)				
Packing group	-	-	-	-
Environmental	No.	No.	No.	No.
hazards				

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

<u>Canadian lists</u>	
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

<u>Inventory list</u> Canada:

All components are listed or exempted.

Section 16. Other information

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ion)



Procedure used to derive the classification

None of the components are classified.

Notice to reader

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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.