

SAFETY DATA SHEET

Assays Primers Mixture

Section 1. Identification

Product Identifier:	Assays Primers Mixture
Product code:	N/A
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:	Not applicable
Response:	Not applicable
Storage:	Not applicable.
Disposal:	Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Other means of identification: Not applicable

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: 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

There are no significant effects or critical hazards

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:	8
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

No information available

Irritation/Corrosion

No information available

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 are no significant effects or critical hazards

Inhalation: There are no significant effects or critical hazards

Skin contact: There are no significant effects or critical hazards

Ingestion: There are no significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological

characteristics

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

Potential delayed

effects: There are no significant effects or critical hazards

Long term exposure

Potential immediate

effects: There are no significant effects or critical hazards

Potential delayed

effects: There are no significant effects or critical hazards

Potential chronic health effects

General: There are no significant effects or critical hazards

Carcinogenicity: There are no significant effects or critical hazards

Mutagenicity: There are no significant effects or critical hazards

Reproductive

toxicity: There are no significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

There is not 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}): There is 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 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: 07/17/2024

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

dl-1 Plasmid

Section 1. Identification

Product Identifier: dl-1 Plasmid
Product code: 35602
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: Not applicable

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:

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

There are no significant effects or critical hazards

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:	8
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

No information available

Irritation/Corrosion

No information available

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 are no significant effects or critical hazards

Inhalation: There are no significant effects or critical hazards

Skin contact: There are no significant effects or critical hazards

Ingestion: There are no significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological

characteristics

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

Potential delayed

effects: There are no significant effects or critical hazards

Long term exposure

Potential immediate

effects: There are no significant effects or critical hazards

Potential delayed

effects: There are no significant effects or critical hazards

Potential chronic health effects

General: There are no significant effects or critical hazards

Carcinogenicity: There are no significant effects or critical hazards

Mutagenicity: There are no significant effects or critical hazards

Reproductive

toxicity: There are no significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

There is not 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}): There is 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 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: 07/17/2024

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

dl-2 Plasmid

Section 1. Identification

Product Identifier: dl-2 Plasmid
Product code: 35603
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: Not applicable

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:

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

There are no significant effects or critical hazards

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:	8
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

No information available

Irritation/Corrosion

No information available

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 are no significant effects or critical hazards

Inhalation: There are no significant effects or critical hazards

Skin contact: There are no significant effects or critical hazards

Ingestion: There are no significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological

characteristics

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

Potential delayed

effects: There are no significant effects or critical hazards

Long term exposure

Potential immediate

effects: There are no significant effects or critical hazards

Potential delayed

effects: There are no significant effects or critical hazards

Potential chronic health effects

General: There are no significant effects or critical hazards

Carcinogenicity: There are no significant effects or critical hazards

Mutagenicity: There are no significant effects or critical hazards

Reproductive

toxicity: There are no significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

There is not 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}): There is 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 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: 07/17/2024

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

Nuclease free water

Section 1. Identification

Product Identifier: Nuclease free water
Product code: 54801
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:

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

- 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

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-emergency

personnel: Not applicable.

For emergency

responders: Not applicable

Environmental

precautions: 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 handling

Protective measures: Not applicable
Advice on general occupational hygiene: Not applicable
Conditions for safe storage, including incompatibilities: Not applicable

Section 8. Exposure controls/personal protection

Control parameters

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:

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:	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: 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

Not applicable

Irritation/Corrosion

No information available

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 not data available

Section 12. Ecological information

Toxicity

Not applicable

Persistence and degradability

There is no data available.

Mobility in soil

Soil/water partition

coefficient (K_{oc}): 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 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.

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: 07/12/2024

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
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

Plasmid Positive Control

Section 1. Identification

Product Identifier: Plasmid Positive Control
Product code: 35604, 37008
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: Not applicable

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:

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

There are no significant effects or critical hazards

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:	8
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

No information available

Irritation/Corrosion

No information available

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 are no significant effects or critical hazards

Inhalation: There are no significant effects or critical hazards

Skin contact: There are no significant effects or critical hazards

Ingestion: There are no significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological

characteristics

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

Potential delayed

effects: There are no significant effects or critical hazards

Long term exposure

Potential immediate

effects: There are no significant effects or critical hazards

Potential delayed

effects: There are no significant effects or critical hazards

Potential chronic health effects

General: There are no significant effects or critical hazards

Carcinogenicity: There are no significant effects or critical hazards

Mutagenicity: There are no significant effects or critical hazards

Reproductive

toxicity: There are no significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

There is not 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}): There is 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 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: 07/17/2024

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

Universal Primers Mixture

Section 1. Identification

Product Identifier: Universal Primers Mixture
Product code: 35606
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: Not applicable

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:

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

There are no significant effects or critical hazards

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:	8
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

No information available

Irritation/Corrosion

No information available

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 are no significant effects or critical hazards

Inhalation: There are no significant effects or critical hazards

Skin contact: There are no significant effects or critical hazards

Ingestion: There are no significant effects or critical hazards

Symptoms related to the physical, chemical, and toxicological

characteristics

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

Potential delayed

effects: There are no significant effects or critical hazards

Long term exposure

Potential immediate

effects: There are no significant effects or critical hazards

Potential delayed

effects: There are no significant effects or critical hazards

Potential chronic health effects

General: There are no significant effects or critical hazards

Carcinogenicity: There are no significant effects or critical hazards

Mutagenicity: There are no significant effects or critical hazards

Reproductive

toxicity: There are no significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

There is not 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}): There is 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 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: 07/17/2024

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.