COVER SHEET of product NB-62-0001

NB-62-0001-8 **NB-62-0001-16** **NB-62-0001-32** **NB-62-0001-96** **NB-62-0001-384**	**Oncotarget NGS kit**	
Component #	**Description**	**Hazards identification**
OCT1	Frag/AT buffer	Hazardous
OCT2	Frag/AT enzyme	Non-hazardous
OCT3	Ligation Master Mix	Non-hazardous
OCT4	DNA Adaptor Plate	Not applicable
OCT5	Adaptor Dilution Buffer	Non-hazardous
OCT6	PCR Dilution Buffer	Non-hazardous
OCT7	Primer mix	Not applicable
OCT8	Equinox Amplification Master Mix (2X)	Non-hazardous
OCT9	Premix Indexing Block	Non-hazardous
OCT10	Hybridization 1	Hazardous
OCT11	Hybridization 2	Non-hazardous
OCT12	Hybridization 3	Non-hazardous
OCT13	Hybridization 4	Non-hazardous
OCT14	RNase Block	Non-hazardous
OCT15	Capture probes	Not applicable

All components of the kit NB-62-0001 are in compliance with applicable legislation:

- Regulation (EC) 1907/2006 (REACH)
- Regulation (EC) 1272/2008 (CLP)
- Transport under IATA/ADR/IMDG.

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Frag/AT Buffer

Trade name: Frag/AT Buffer

Product no.: OCT1

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Acute toxicity (oral), category 4
Specific target organ toxicity - single exposure, category 2
Chronic aquatic hazard, category 3

Hazard-determining components of labeling:
Tetramethylammonium chloride

2.2 Label elements CLP no. 1272/2008:

Hazard pictograms:

Signal word:
GHS07: warning
GHS08: health hazard

Hazard statements:
H371 May cause damage to organs (Central Nervous System) via ingestion

H302 Harmful if swallowed
H412 Harmful to aquatic life with long lasting effects

Precautionary statements:
Prevention:
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash any exposed skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment

Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 Rinse mouth
P308+P311 IF exposed or concerned: Call a POISON CENTER or physician

Storage:
P405 - Store locked up

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations

Additional labeling:
None.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
75-57-0	Tetramethylammonium chloride	Acute Tox. 2 (Oral); H300 Acute Tox. 3 (Dermal); H311 Skin Irrit. 2; H315 STOT SE 1; H370 Aquatic Chronic 2; H411 1-4 weight %
77-86-1	Tromethamine	Skin Irrit. 2; H315 STOT SE 3 (RI); H335 Eye Irrit. 2; H319 <0.5 weight %

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits, if available, are listed in section 8.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

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

Skin contact: Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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. If necessary, call a poison center or physician.

Ingestion: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if 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 necessary, call a poison center or physician. 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.

4.2 Most important symptoms and effects, both acute and delayed:

Potential acute health effects

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Ingestion of Tetramethylammonium chloride may damage the central nervous system.

Over-exposure signs/symptoms

Symptoms of exposure may be delayed.

No significant delayed effects/symptoms.

4.3 Indication of any immediate medical attention and special treatment needed:

Notes to physician: If exhibiting symptoms of exposure, seek prompt medical attention. Treat symptomatically.

Specific treatments: No specific treatment.

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

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:
Do not use water jet.

5.2 Special hazards arising from the substance or mixture:
Thermal decomposition may produce irritating and toxic fumes including carbon oxides, ammonia, hydrogen chloride, nitrogen oxides, magnesium oxides and sodium oxides.

5.3 Advice for firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment – see section 8. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid breathing mist/vapor. Keep unauthorized and unprotected persons away.

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

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

6.3 Methods and material for containment and cleaning up:
Small Spills: 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 Spills: 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.

6.4 Reference to other sections:

See section 8 and 13 for further information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Protective measures: Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Storage Temperature: -25 °C to -15 °C

7.3 Specific end use(s): Refer to Section 1 (Recommended Use).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Only the substance with limit values have been included below.

CAS-no:	Name:	Limits:
77-86-1	Tromethamine	8-Hour TWA: 10 mg/m³ (Dust, inhalable) 8-Hour TWA: 3 mg/m³ (Dust, respirable)

No biological exposure limits noted for the ingredient(s).

DNEL:

Acute effects

Name	Oral	Dermal	Inhalation
Tromethamine 77-86-1	Not determined or not applicable.	No hazard identified	No hazard identified
Tetramethylammonium chloride 75-57-0	Not determined or not applicable.	No exposure expected.	Hazard identified but no DNEL available.

Chronic effects

Name	Oral	Dermal	Inhalation
Tromethamine 77-86-1	General population, systemic effects: 8.3 mg/kg bw/day	Workers, systemic effects: 166.7 mg/kg bw/da General population, systemic effects: 83.3 mg/kg bw/day	Workers, systemic effects: 117.5 mg/m³ General population, systemic effects: 29 mg/m³
Tetramethylammonium chloride 75-57-0	General population, systemic effects: 0.25 mg/kg bw/day	Workers, systemic effects: 0.4 mg/kg bw/day General population, systemic effects: 0.25 mg/kg bw/day	Workers, systemic effects: 2.9 mg/m³ General population, systemic effects: 1.76 mg/m³

PNEC:

Name	Freshwater	Freshwater sediments	Marine water	Air
Tromethamine 77-86-1	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Tetramethylammonium chloride 75-57-0	0.6 µg/L	0.035 mg/kg sediment dw	0.06 µg/L	No hazard identified

Name	Marine sediment	Sewage treatment	Soil	Food chain
Tromethamine 77-86-1	No hazard identified	300 mg/L	No hazard identified	No exposure expected
Tetramethylammonium chloride 75-57-0	0.0035 mg/kg sediment dw	6 mg/L	0.0066 mg/kg soil dw	No hazard identified

8.2 Exposure controls Appropriate

technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Personal protective equipment:

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

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

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

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

Body protection: Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	**Color:**	**Odor:**	**PH:**	**Viscosity:**
Liquid	Clear	Odorless	8.3	Not available
Flashpoint:	**Boiling point:**	**Vapor pressure:**	**Density:**	**Melting point:**
Not available	Not available	Not available	Not available	Not available
Thermal decomposition:	**Auto-ignition:**	**Explosive limits**	**Solubility in water:**	
Not available	Not applicable	Not applicable	Not available	

9.2 Other information:
Data not available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: Not reactive under recommended handling and storage conditions.

10.2 Chemical stability: Stable under normal storage conditions and recommended use.

10.3 Possibility of hazardous reactions:
Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4 Conditions to avoid: Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	Assessment: Harmful if swallowed. Tromethamine Oral → LD50 Rat: >5000 mg/kg Dermal → LD50 Rat: >5000 mg/kg Tetramethylammonium chloride Oral → LD50 Rat: 50 mg/kg Dermal → LD50 Rabbit: 200-500 mg/kg
Skin corrosion/irritation:	Assessment: Based on available data, the classification criteria are not met. Tromethamine → Causes skin irritation. Tetramethylammonium chloride → Causes skin irritation.
Serious eye damage/irritation:	Assessment: Based on available data, the classification criteria are not met. Tromethamine → Causes serious eye irritation.
Respiratory or skin sensitization:	Assessment: Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Assessment: Based on available data, the classification criteria are not met.
Carcinogenicity:	Assessment: Based on available data, the classification criteria are not met.
Reproductive toxicity:	Data not available.
Specific target organ toxicity - single exposure:	Assessment: May cause damage to organs. Tromethamine → May cause respiratory irritation. Tetramethylammonium chloride → Causes damage to the central nervous system through oral exposure.
Specific target organ toxicity – repeated exposure:	Data not available.
Aspiration hazard:	Data not available.

11.2 Additional information:

Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or

omission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Acute (short-term) toxicity
Based on available data, the classification criteria are not met.

Tromethamine
Aquatic Invertebrates EC50 Daphnia magna: >980 mg/L (48 hr [mobility])
Aquatic Plants EC50 Pseudokirchneriella subcapitata: 397 mg/L (72 hr [cell number])
Fish LC50 Freshwater fish: >4000 mg/L (96 hr)

Tetramethylammonium chloride
Fish LC50 Pimephales promelas: 462 mg/L (96 hr)
Aquatic Invertebrates LC50 Daphnia magna: 3 mg/L (48 hr [mobility, Read-across substance data])
Aquatic Plants EC50 Raphidocelis subcapitata: 96.3 mg/L (72 hr [growth rate, Read-across substance data])

Chronic (long-term) toxicity
Harmful to aquatic life with long lasting effects.

Tetramethylammonium chloride
Aquatic Invertebrates LC50 Daphnia magna: 0.03 mg/L (11 d [mortality])

12.2 Persistence and degradability:

Tromethamine
Readily biodegradable in water (65.9% biodegradation in 28 days, measured by CO2 evolution).
Tetramethylammonium chloride
The substance is readily biodegradable. 100% degradation measured by CO2 evolution, after 28 days (Read-across substance data)..

12.3 Bioaccumulative potential:

Tromethamine
No significant bioaccumulation expected. Log Kow (aquatic species): -2.31
Tetramethylammonium chloride
The substance is not expected to bioaccumulate (log Kow= -1.6 at 20 °C)

12.4 Mobility in soil:

Tromethamine
Mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 75
Tetramethylammonium chloride
The substance is moderately mobile, therefore, moderate adsorption to soil is expected (Koc= 546 mL/g)

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT.
This product does not contain any substances that are assessed to be a vPvB.

12.6 Endocrine disrupting properties

No data available.

No data available.

12.7 Other adverse effects:

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment 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 disposed 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.

Contaminated packing: Packaging which contains leftovers from the product must be disposed of in the same way as the product.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 Special precautions for user:
Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
Inventory listing (EINECS): All ingredients are listed or exempt.
REACH SVHC candidate list: None of the ingredients are listed.
REACH SVHC Authorizations: None of the ingredients are listed.
REACH Restriction: None of the ingredients are listed.
Water hazard class (WGK) (Product): Not determined.
Water hazard class (WGK) (Substance):
Tromethamine (CAS number 77-86-1) - Water hazard class 1: slightly hazardous to water
Tetramethylammonium chloride (CAS number 75-57-0) - Water hazard class 3: highly hazardous to water

Other regulations
Germany TA Luft:

Name	CAS number	Class	Base Emission Rate	Max Concentration

Tetramethylammonium chloride	75-57-0	Class I	0.10 kg/h	20 mg/m³

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Classification according to Regulation (EC) No. 1272/2008 (CLP):
Acute toxicity (oral), category 4
Specific target organ toxicity - single exposure, category 2
Chronic aquatic hazard, category 3

Summary of classification(s) in section 3:
Acute Tox. 2 (Oral) - Acute toxicity (oral), category 2
Acute Tox. 3 (Dermal) - Acute toxicity (dermal), category 3
Skin Irrit. 2 - Skin irritation, category 2
STOT SE 1 - Specific target organ toxicity - single exposure, category 1
Aquatic Chronic 2 - Chronic aquatic hazard, category 2
STOT SE 3 (RI) - Specific target organ toxicity - single exposure, category 3, respiratory tract irritation
Eye Irrit. 2 - Eye Irritation, category 2

Summary of hazard statements in section 3:
H300 - Fatal if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H370 - Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H411 - Toxic to aquatic life with long lasting effects
H335 - May cause respiratory irritation
H319 - Causes serious eye irritation.

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Frag/AT enzyme

Trade name: Frag/AT enzyme

Product no.: OCT2

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
56-81-5	Glycerol	Not classified 25-50 weight %
77-86-1	Tromethamine	Skin Irrit. 2; H315 STOT SE 3 (RI); H335 Eye Irrit. 2; H319 <0.5 weight %

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove to fresh air.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion: Wash out mouth with water. If swallowed, do not induce vomiting unless told to do so by a physician or poison control center.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:

Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition may produce irritating and toxic fumes including carbon oxides, acrolein, ammonia, hydrogen chloride, nitrogen oxides and sodium oxides.

5.3 Advice for firefighters:

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Storage Temperature: -25 °C to -15 °C.

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

Only those substances with limit values have been included below.

CAS-no:	Name:	Limits:
56-81-5	Glycerol	8-Hour TWA: 10 mg/m³ (most of EU) 8-Hour TWA: 20 mg/m³ (Finland) 8-Hour TWA: 200 mg/m³ (Slovenia, Germany) 8-Hour TWA: 2 mg/m³ (Cyprus)
77-86-1	Tromethamine	8-Hour TWA: 10 mg/m³ (Dust, inhalable) 8-Hour TWA: 3 mg/m³ (Dust, respirable)

No biological exposure limits noted for the ingredient(s).

DNEL:

Acute effects

Name	Oral	Dermal	Inhalation
Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified
Tromethamine 77-86-1	Not determined or not applicable.	No hazard identified	No hazard identified

Chronic effects

Name	Oral	Dermal	Inhalation
Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified

Tromethamine 77-86-1	General population, systemic effects: 8.3 mg/kg bw/day	Workers, systemic effects: 166.7 mg/kg bw/da General population, systemic effects: 83.3 mg/kg bw/day	Workers, systemic effects: 117.5 mg/m³ General population, systemic effects: 29 mg/m³

PNEC:

Name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Tromethamine 77-86-1	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified

Name	Freshwater sediments	Marine sediment	Sewage treatment	Soil	Food chain
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No exposure expected
Tromethamine 77-86-1	No hazard identified	No hazard identified	300 mg/L	No hazard identified	No exposure expected

8.2 Exposure controls

Appropriate technical measures:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

Respiratory protection:

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection:

No special protective equipment required.

Eye protection:

No special protective equipment required.

Body protection:

No special protective equipment required.

8.3 Measures to avoid environmental exposure:

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Clear	**Odor:** Odorless	**PH:** Not available	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** Not available	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** Not available
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Not available	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials: Oxidizing agents.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: Based on available data, the classification criteria are not met.

Name	Route	Results
Glycerol	oral	LD50 Rat: 27,200 mg/kg
	dermal	LD50 Guinea Pig: 56,750 mg/kg
	inhalation	LC50 Rat: > 5850 mg/m³ (4 hr [Aerosol])
Tromethamine	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rat: >5000 mg/kg

Skin corrosion/irritation:	Tromethamine causes skin irritation.
Serious eye damage/irritation:	Tromethamine causes serious eye irritation.
Respiratory or skin sensitization:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	Tromethamine may cause respiratory irritation.
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or omission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Glycerol
Fish LC50 Oncorhynchus mykiss: 54,000 mg/L (96 hr)
Aquatic Invertebrates LC50 Daphnia magna: 1955 mg/L (48 hr)

Tromethamine
Aquatic Invertebrates EC50 Daphnia magna: >980 mg/L (48 hr [mobility])
Aquatic Plants EC50 Pseudokirchneriella subcapitata: 397 mg/L (72 hr [cell number])
Fish LC50 Freshwater fish: >4000 mg/L (96 hr)

12.2 Persistence and degradability:

Glycerol
The substance is readily biodegradable. 94% degradation, measured by TOC removal, after 24 hr.

Tromethamine
Readily biodegradable in water (65.9% biodegradation in 28 days, measured by CO2 evolution).

12.3 Bioaccumulative potential:

Glycerol
The substance has a low potential for bioaccumulation based on log Kow <=3.
Tromethamine

No significant bioaccumulation expected. Log Kow (aquatic species): -2.31.

12.4 Mobility in soil:

Tromethamine
Mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 75.

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:

Not regulated.

14.1 Special precautions for user:

Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:

Inventory listing (EINECS): All ingredients are listed or exempt.
REACH SVHC candidate list: None of the ingredients are listed.
REACH SVHC Authorizations: None of the ingredients are listed.
REACH Restriction: None of the ingredients are listed.
Water hazard class (WGK) (Product): Not determined.
Water hazard class (WGK) (Substance):
Tromethamine (CAS number 77-86-1) - Water hazard class 1: slightly hazardous to water
Other regulations
Germany TA Luft: None of the ingredients are listed.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Skin Irrit. 2 -- Skin irritation, category 2
STOT SE 3 (RI) -- Specific target organ toxicity - single exposure, category 3, respiratory tract irritation
Eye Irrit. 2 -- Eye Irritation, category 2

Summary of hazard statements in section 3:
H315 - Causes skin irritation
H335 - May cause respiratory irritation

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Ligation Master Mix

Trade name: Ligation Master Mix

Product no.: OCT3

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
56-81-5	Glycerol	Not classified 40-50 weight %
111-46-6	Diethylene glycol	Acute Tox. 4 (Oral); H302 Acute Toxicity Estimate: Oral ATE: 500 mg/kg 5-10 weight %
77-86-1	Tromethamine	Skin Irrit. 2; H315 STOT SE 3 (RI); H335 Eye Irrit. 2; H319 <0.5 weight %

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove to fresh air.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion: Wash out mouth with water. If swallowed, do not induce vomiting unless told to do so by a physician or poison control center.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:
Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture:
Thermal decomposition may produce irritating and toxic fumes including carbon oxides, acrolein, ammonia, hydrogen chloride, nitrogen oxides and sodium oxides.

5.3 Advice for firefighters: Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

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

6.3 Methods and material for containment and cleaning up:
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.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

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

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

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Storage Temperature: -25 °C to -15 °C.

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Only those substances with limit values have been included below.

CAS-no:	Name:	Limits:
56-81-5	Glycerol	8-Hour TWA: 10 mg/m³ (most of EU) 8-Hour TWA: 20 mg/m³ (Finland) 8-Hour TWA: 200 mg/m³ (Slovenia, Germany) 8-Hour TWA: 2 mg/m³ (Cyprus)
111-46-6	Diethylene glycol	8-Hour TWA: 11 mg/m³ (2.5 ppm) - Denmark TWA Exposure Limit Value: 44 mg/m³ (10 ppm) – Germany 8-Hour TWA: 44 mg/m³ (10 ppm) – Austria TLV-TWA: 45 mg/m³ (10 ppm) - Sweden Short Term Limit Value: 90 mg/m³ (20 ppm) – Sweden
77-86-1	Tromethamine	8-Hour TWA: 10 mg/m³ (Dust, inhalable) 8-Hour TWA: 3 mg/m³ (Dust, respirable)

No biological exposure limits noted for the ingredient(s).

DNEL:

Acute effects

Name	Oral	Dermal	Inhalation

Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	Not determined or not applicable.	No hazard identified	No hazard identified
Tromethamine 77-86-1	Not determined or not applicable.	No hazard identified	No hazard identified

Chronic effects

Name	Oral	Dermal	Inhalation
Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	No hazard identified	Workers, systemic effects: 43 mg/kg bw/day General population, systemic effects: 21 mg/kg bw/day	Workers, systemic effects: 44 mg/m³ Workers, local effects: 60 mg/m³ General population, systemic effects: 12 mg/m³ General population, local effects: 12 mg/m³
Tromethamine 77-86-1	General population, systemic effects: 8.3 mg/kg bw/day	Workers, systemic effects: 166.7 mg/kg bw/da General population, systemic effects: 83.3 mg/kg bw/day	Workers, systemic effects: 117.5 mg/m³ General population, systemic effects: 29 mg/m³

PNEC:

Name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Tromethamine 77-86-1	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified

Name	Freshwater sediments	Marine sediment	Sewage treatment	Soil	Food chain
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No exposure expected
Diethylene glycol 111-46-6	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No exposure expected
Tromethamine 77-86-1	No hazard identified	No hazard identified	300 mg/L	No hazard identified	No exposure expected

8.2 Exposure controls

Appropriate technical measures: Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

General information / Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection: No special protective equipment required.

Eye protection: No special protective equipment required.

Body protection: No special protective equipment required.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	**Color:**	**Odor:**	**PH:**	**Viscosity:**
Liquid	Clear	Odorless	7.8	Not available
Flashpoint:	**Boiling point:**	**Vapor pressure:**	**Density:**	**Melting point:**
Not available	Not available	Not available	Not available	Not available
Thermal decomposition:	**Auto-ignition:**	**Explosive limits**	**Solubility in water:**	
Not available	Not applicable	Not applicable	Not available	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials: Oxidizing agents.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: Based on available data, the classification criteria are not met.

Name	Route	Results
Glycerol	oral	LD50 Rat: 27,200 mg/kg
	dermal	LD50 Guinea Pig: 56,750 mg/kg
	inhalation	LC50 Rat: > 5850 mg/m³ (4 hr [Aerosol])
Diethylene glycol	dermal	LD50 Rabbit: 11,890 mg/kg
	oral ATE	LD50 Rat: 500 mg/kg
	inhalation	LC50 Rat: >4.6 mg/L (4 hr [Aerosol])
Tromethamine	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rat: >5000 mg/kg

Skin corrosion/irritation: Tromethamine causes skin irritation.

Serious eye damage/irritation: Tromethamine causes serious eye irritation.

Respiratory or skin sensitization: No known significant effects or critical hazards.

Germ cell mutagenicity: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Specific target organ toxicity - single exposure: Tromethamine may cause respiratory irritation.

Specific target organ toxicity – repeated exposure: No known significant effects or critical hazards.

Aspiration hazard: No known significant effects or critical hazards.

11.2 Information on other hazards

Endocrine disrupting properties: No additional data.

Additional information: No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Acute (short-term) toxicity

Glycerol
Fish LC50 Oncorhynchus mykiss: 54,000 mg/L (96 hr)
Aquatic Invertebrates LC50 Daphnia magna: 1955 mg/L (48 hr)

Diethylene glycol
Fish LC50 Pimephales promelas: 75,222 mg/L (96 hr)
Aquatic Invertebrates EC50 Daphnia magna: 10,000 mg/L (24 hr [behaviour])
Aquatic Plants EC50 Flagellate Euglenoid: 10,745 mg/L (72 hr [growth rate])

Tromethamine
Aquatic Invertebrates EC50 Daphnia magna: >980 mg/L (48 hr [mobility])
Aquatic Plants EC50 Pseudokirchneriella subcapitata: 397 mg/L (72 hr [cell number])
Fish LC50 Freshwater fish: >4000 mg/L (96 hr)

Chronic (long-term) toxicity

Diethylene glycol
Fish NOEC Menidia peninsulae: >40 mg/L (28 d [mortality, Read-across substance data])
Aquatic Plants NOEC Daphnia magna: 7500 - 15,000 mg/L (21 d [growth])

12.2 Persistence and degradability:

Glycerol
The substance is readily biodegradable. 94% degradation, measured by TOC removal, after 24 hr.

Diethylene glycol
The substance is readily biodegradable.102 % degradation in water, measured by DOC removal, after 28 days.

Tromethamine
Readily biodegradable in water (65.9% biodegradation in 28 days, measured by CO2 evolution).

12.3 Bioaccumulative potential:

Glycerol
The substance has a low potential for bioaccumulation based on log Kow <=3.

Diethylene glycol
The substance is not expected to bioaccumulate (log Kow= -1.98 at 25 °C).

Tromethamine
No significant bioaccumulation expected. Log Kow (aquatic species): -2.31.

12.4 Mobility in soil:

Diethylene glycol
The substance is highly mobile, therefore, adsorption to soil is not expected (Koc=1).

Tromethamine
Mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 75.

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 Special precautions for user:
Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
Inventory listing (EINECS): All ingredients are listed or exempt.

REACH SVHC candidate list: None of the ingredients are listed.
REACH SVHC Authorizations: None of the ingredients are listed.
REACH Restriction:
Diethylene glycol (CAS number 111-46-6) - listed
Tromethamine (CAS number 77-86-1) – not listed

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):
Diethylene glycol (CAS number 111-46-6) - Water hazard class 1: slightly hazardous to water
Tromethamine (CAS number 77-86-1) - Water hazard class 1: slightly hazardous to water

Other regulations
Germany TA Luft: None of the ingredients are listed.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Acute Tox. 4 (Oral) -- Acute toxicity (oral), category 4
Skin Irrit. 2 -- Skin irritation, category 2
STOT SE 3 (RI) -- Specific target organ toxicity - single exposure, category 3, respiratory tract irritation
Eye Irrit. 2 -- Eye Irritation, category 2

Summary of hazard statements in section 3:
H302 - Harmful if swallowed
H315 - Causes skin irritation
H335 - May cause respiratory irritation
H319 - Causes serious eye irritation

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Adaptor Dilution Buffer

Trade name: Adaptor Dilution Buffer

Product no.: OCT5

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove to fresh air.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion: Wash out mouth with water.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:
Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture:
No information available.

5.3 Advice for firefighters: Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Use personal protection equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:

Workers

Name	Oral	Dermal	Inhalation
Trade secret	No hazard identified	295.52 mg/kg bw/day [4] [6] 295.52 mg/kg bw/day [4] [7]	2068.62 mg/m^3 [4] [6] 2068.62 mg/m^3 [4] [7]
Trade secret	No hazard identified	216.6 mg/kg bw/day [4] [6]	152.8 mg/m^3 [4] [6]

General Public

Name	Oral	Dermal	Inhalation
Trade secret	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	443.28 mg/m3 [4] [6] 443.28 mg/m3 [4] [7]
Trade secret	10.8 mg/kg bw/day [4] [6]	No hazard identified	37.7 mg/m3 [4] [6]
Trade secret	7 mg/kg bw/day [4] [6]	No hazard identified	No hazard identified

Notes
[4] Systemic health effects.
[6] Long term.
[7] Short term.

PNEC:

Name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Trade secret	5 mg/L	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Trade secret	3.21 mg/L	5.48 mg/L	0.32 mg/L	No hazard identified	No hazard identified

Name	Freshwater sediments	Marine sediment	Sewage treatment	Soil	Food chain
Trade secret	No hazard identified	No hazard identified	500 mg/L	4.86 mg/kg soil dw	No hazard identified

Trade secret	288.9 mg/kg sediment dw	28.89 mg/kg sediment dw	90 mg/L	662.77 mg/kg soil dw	No hazard identified

8.2 Exposure controls

Appropriate technical measures:

No information available.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection: No special protective equipment required.

Eye protection: No special protective equipment required.

Body protection: No special protective equipment required.

8.3 Measures to avoid environmental exposure:

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Clear	**Odor:** Not available	**PH:** 7,5	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** Not available	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** Not available
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Not available	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products:
None known based on information supplied.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: No known significant effects or critical hazards.

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 99,999.00 mg/kg
ATEmix (dermal) 99,999.00 mg/kg
ATEmix (inhalation-gas) 99,999.00 ppm
ATEmix (inhalation-vapor) 99,999.00 mg/l
ATEmix (inhalation-dust/mist) 99,999.00 mg/l

Name	Oral LD50	Dermal LD50	Inhalation LC50
Trade secret	= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat) 1 h

Skin corrosion/irritation: No known significant effects or critical hazards.

Serious eye damage/irritation: No known significant effects or critical hazards.

Respiratory or skin sensitization: No known significant effects or critical hazards.

Germ cell mutagenicity: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Specific target organ toxicity - single exposure: No known significant effects or critical hazards.

Specific target organ toxicity – repeated exposure: No known significant effects or critical hazards.

Aspiration hazard: No known significant effects or critical hazards.

11.2 Additional information: No additional data.

Endocrine disrupting properties: No additional data.

Additional information: No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards. Contains 0 % of components with unknown hazards to the aquatic environment.

Fish
LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)
LC50: =12946mg/L (96h, Lepomis macrochirus)
LC50: 6020 - 7070mg/L (96h, Pimephales promelas)
LC50: =7050mg/L (96h, Pimephales promelas)
LC50: 6420 - 6700mg/L (96h, Pimephales promelas)
LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss)

Crustacea
EC50: =1000mg/L (48h, Daphnia magna)
EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 Special precautions for user:
Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
-

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier PCR Dilution Buffer

Trade name: PCR Dilution Buffer

Product no.: OCT6

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company: **NEO BIOTECH**
Manufacturer/Distributor 74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:
European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove to fresh air.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion: Wash out mouth with water.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:
Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture:

No information available.

5.3 Advice for firefighters: Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Use personal protection equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:

Workers

Name	Oral	Dermal	Inhalation
Trade secret	No hazard identified	295.52 mg/kg bw/day [4] [6] 295.52 mg/kg bw/day [4] [7]	2068.62 mg/m3 [4] [6] 2068.62 mg/m3 [4] [7]
Trade secret	No hazard identified	216.6 mg/kg bw/day [4] [6]	152.8 mg/m3 [4] [6]

General Public

Name	Oral	Dermal	Inhalation
Trade secret	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	126.65 mg/kg bw/day [4] [6] 126.65 mg/kg bw/day [4] [7]	443.28 mg/m3 [4] [6] 443.28 mg/m3 [4] [7]
Trade secret	10.8 mg/kg bw/day [4] [6]	No hazard identified	37.7 mg/m3 [4] [6]
Trade secret	7 mg/kg bw/day [4] [6]	No hazard identified	No hazard identified

Notes
[4] Systemic health effects.
[6] Long term.
[7] Short term.

PNEC:

Name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Trade secret	5 mg/L	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Trade secret	3.21 mg/L	5.48 mg/L	0.32 mg/L	No hazard identified	No hazard identified

Name	Freshwater sediments	Marine sediment	Sewage treatment	Soil	Food chain
Trade secret	No hazard identified	No hazard identified	500 mg/L	4.86 mg/kg soil dw	No hazard identified
Trade secret	288.9 mg/kg sediment dw	28.89 mg/kg sediment dw	90 mg/L	662.77 mg/kg soil dw	No hazard identified

8.2 Exposure controls

Appropriate technical measures:
No information available.

General information / Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection: No special protective equipment required.

Eye protection: No special protective equipment required.

Body protection: No special protective equipment required.

8.3 Measures to avoid environmental exposure:
No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	**Color:**	**Odor:**	**PH:**	**Viscosity:**
Liquid	Clear	Not available	7,5	Not available
Flashpoint:	**Boiling point:**	**Vapor pressure:**	**Density:**	**Melting point:**
Not available	Not available	Not available	Not available	Not available
Thermal decomposition:	**Auto-ignition:**	**Explosive limits**	**Solubility in water:**	
Not available	Not applicable	Not applicable	Not available	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products:
None known based on information supplied.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: No known significant effects or critical hazards.

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 99,999.00 mg/kg
ATEmix (dermal) 99,999.00 mg/kg
ATEmix (inhalation-gas) 99,999.00 ppm
ATEmix (inhalation-vapor) 99,999.00 mg/l
ATEmix (inhalation-dust/mist) 99,999.00 mg/l

Name	Oral LD50	Dermal LD50	Inhalation LC50
Trade secret	= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat) 1 h

Skin corrosion/irritation: No known significant effects or critical hazards.

Serious eye damage/irritation: No known significant effects or critical hazards.

Respiratory or skin sensitization: No known significant effects or critical hazards.

Germ cell mutagenicity: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Specific target organ toxicity - single exposure: No known significant effects or critical hazards.

Specific target organ toxicity – repeated exposure: No known significant effects or critical hazards.

Aspiration hazard: No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties: No additional data.

Additional information: No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards. Contains 0 % of components with unknown hazards to the aquatic environment.

Fish
LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)
LC50: =12946mg/L (96h, Lepomis macrochirus)
LC50: 6020 - 7070mg/L (96h, Pimephales promelas)
LC50: =7050mg/L (96h, Pimephales promelas)
LC50: 6420 - 6700mg/L (96h, Pimephales promelas)
LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss)

Crustacea
EC50: =1000mg/L (48h, Daphnia magna)
EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 Special precautions for user:
Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Additional information: -

15.2 Chemical safety assessment:
No information available.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
-

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Equinox Amplification Master Mix (2X)

Trade name: Equinox Amplification Master Mix (2X)

Product no.: OCT8

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
56-81-5	Glycerol	Not classified 40-50 weight %
111-46-6	Diethylene glycol	Acute Tox. 4 (Oral); H302 Acute Toxicity Estimate: Oral ATE: 500 mg/kg 5-10 weight %
77-86-1	Tromethamine	Skin Irrit. 2; H315 STOT SE 3 (RI); H335 Eye Irrit. 2; H319 <0.5 weight %

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove to fresh air.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion: Wash out mouth with water. If swallowed, do not induce vomiting unless told to do so by a physician or poison control center.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:
Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture:
Thermal decomposition may produce irritating and toxic fumes including carbon oxides, acrolein, ammonia, hydrogen chloride, nitrogen oxides and sodium oxides.

5.3 Advice for firefighters: Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

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

6.3 Methods and material for containment and cleaning up:
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.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:
Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Storage Temperature: -25 °C to -15 °C.

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

Only those substances with limit values have been included below.

CAS-no:	Name:	Limits:
56-81-5	Glycerol	8-Hour TWA: 10 mg/m³ (most of EU) 8-Hour TWA: 20 mg/m³ (Finland) 8-Hour TWA: 200 mg/m³ (Slovenia, Germany) 8-Hour TWA: 2 mg/m³ (Cyprus)
111-46-6	Diethylene glycol	8-Hour TWA: 11 mg/m³ (2.5 ppm) - Denmark TWA Exposure Limit Value: 44 mg/m³ (10 ppm) – Germany 8-Hour TWA: 44 mg/m³ (10 ppm) – Austria TLV-TWA: 45 mg/m³ (10 ppm) - Sweden Short Term Limit Value: 90 mg/m³ (20 ppm) – Sweden
77-86-1	Tromethamine	8-Hour TWA: 10 mg/m³ (Dust, inhalable) 8-Hour TWA: 3 mg/m³ (Dust, respirable)

No biological exposure limits noted for the ingredient(s).

DNEL:

Acute effects

Name	Oral	Dermal	Inhalation
Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	Not determined or not applicable.	No hazard identified	No hazard identified
Tromethamine 77-86-1	Not determined or not applicable.	No hazard identified	No hazard identified

Chronic effects

Name	Oral	Dermal	Inhalation
Glycerol 56-81-5	Not determined or not applicable.	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	No hazard identified	Workers, systemic effects: 43 mg/kg bw/day General population, systemic effects: 21 mg/kg bw/day	Workers, systemic effects: 44 mg/m³ Workers, local effects: 60 mg/m³ General population, systemic effects: 12 mg/m³ General population, local effects: 12 mg/m³
Tromethamine 77-86-1	General population, systemic effects: 8.3 mg/kg bw/day	Workers, systemic effects: 166.7 mg/kg bw/da General population, systemic effects: 83.3 mg/kg bw/day	Workers, systemic effects: 117.5 mg/m³ General population, systemic effects: 29 mg/m³

PNEC:

Name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Diethylene glycol 111-46-6	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
Tromethamine 77-86-1	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified

Name	Freshwater sediments	Marine sediment	Sewage treatment	Soil	Food chain
Glycerol 56-81-5	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No exposure expected
Diethylene glycol 111-46-6	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No exposure expected
Tromethamine 77-86-1	No hazard identified	No hazard identified	300 mg/L	No hazard identified	No exposure expected

8.2 Exposure controls

Appropriate technical measures:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection: No special protective equipment required.

Eye protection: No special protective equipment required.

Body protection: No special protective equipment required.

8.3 Measures to avoid environmental exposure:

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	**Color:**	**Odor:**	**PH:**	**Viscosity:**
Liquid	Clear	Odorless	7.8	Not available
Flashpoint:	**Boiling point:**	**Vapor pressure:**	**Density:**	**Melting point:**
Not available	Not available	Not available	Not available	Not available
Thermal decomposition:	**Auto-ignition:**	**Explosive limits**	**Solubility in water:**	
Not available	Not applicable	Not applicable	Not available	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials: Oxidizing agents.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: Based on available data, the classification criteria are not met.

Name	Route	Results
Glycerol	oral	LD50 Rat: 27,200 mg/kg
	dermal	LD50 Guinea Pig: 56,750 mg/kg
	inhalation	LC50 Rat: > 5850 mg/m³ (4 hr [Aerosol])
Diethylene glycol	dermal	LD50 Rabbit: 11,890 mg/kg
	oral ATE	LD50 Rat: 500 mg/kg
	inhalation	LC50 Rat: >4.6 mg/L (4 hr [Aerosol])
Tromethamine	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rat: >5000 mg/kg

Skin corrosion/irritation: Tromethamine causes skin irritation.

Serious eye damage/irritation: Tromethamine causes serious eye irritation.

Respiratory or skin sensitization: No known significant effects or critical hazards.

Germ cell mutagenicity: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Specific target organ toxicity - single exposure: Tromethamine may cause respiratory irritation.

Specific target organ toxicity – repeated exposure: No known significant effects or critical hazards.

Aspiration hazard: No known significant effects or critical hazards.

11.2 Information on other hazards

Endocrine disrupting properties: No additional data.

Additional information: No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Acute (short-term) toxicity

Glycerol
Fish LC50 Oncorhynchus mykiss: 54,000 mg/L (96 hr)
Aquatic Invertebrates LC50 Daphnia magna: 1955 mg/L (48 hr)

Diethylene glycol
Fish LC50 Pimephales promelas: 75,222 mg/L (96 hr)
Aquatic Invertebrates EC50 Daphnia magna: 10,000 mg/L (24 hr [behaviour])
Aquatic Plants EC50 Flagellate Euglenoid: 10,745 mg/L (72 hr [growth rate])

Tromethamine
Aquatic Invertebrates EC50 Daphnia magna: >980 mg/L (48 hr [mobility])
Aquatic Plants EC50 Pseudokirchneriella subcapitata: 397 mg/L (72 hr [cell number])
Fish LC50 Freshwater fish: >4000 mg/L (96 hr)

Chronic (long-term) toxicity

Diethylene glycol
Fish NOEC Menidia peninsulae: >40 mg/L (28 d [mortality, Read-across substance data])
Aquatic Plants NOEC Daphnia magna: 7500 - 15,000 mg/L (21 d [growth])

12.2 Persistence and degradability:

Glycerol
The substance is readily biodegradable. 94% degradation, measured by TOC removal, after 24 hr.

Diethylene glycol
The substance is readily biodegradable.102 % degradation in water, measured by DOC removal, after 28 days.

Tromethamine
Readily biodegradable in water (65.9% biodegradation in 28 days, measured by CO2 evolution).

12.3 Bioaccumulative potential:

Glycerol
The substance has a low potential for bioaccumulation based on log Kow <=3.

Diethylene glycol
The substance is not expected to bioaccumulate (log Kow= -1.98 at 25 °C).

Tromethamine
No significant bioaccumulation expected. Log Kow (aquatic species): -2.31.

12.4 Mobility in soil:

Diethylene glycol
The substance is highly mobile, therefore, adsorption to soil is not expected (Koc=1).

Tromethamine
Mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 75.

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 Special precautions for user:
Not regulated.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
Inventory listing (EINECS): All ingredients are listed or exempt.
REACH SVHC candidate list: None of the ingredients are listed.
REACH SVHC Authorizations: None of the ingredients are listed.
REACH Restriction:
Diethylene glycol (CAS number 111-46-6) - listed
Tromethamine (CAS number 77-86-1) – not listed

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):
Diethylene glycol (CAS number 111-46-6) - Water hazard class 1: slightly hazardous to water
Tromethamine (CAS number 77-86-1) - Water hazard class 1: slightly hazardous to water

Other regulations
Germany TA Luft: None of the ingredients are listed.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Acute Tox. 4 (Oral) -- Acute toxicity (oral), category 4
Skin Irrit. 2 -- Skin irritation, category 2
STOT SE 3 (RI) -- Specific target organ toxicity - single exposure, category 3, respiratory tract irritation
Eye Irrit. 2 -- Eye Irritation, category 2

Summary of hazard statements in section 3:
H302 - Harmful if swallowed
H315 - Causes skin irritation
H335 - May cause respiratory irritation
H319 - Causes serious eye irritation

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Premix Indexing Block

Trade name: Premix Indexing Block

Product no.: OCT9

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture:

In a fire or if heated, a pressure increase will occur and the container may burst.

5.3 Advice for firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

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

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Not available	**Odor:** Not available	**PH:** Not available	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** 100º C	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** 0º C
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions:

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	No known significant effects or critical hazards.
Skin corrosion/irritation:	No known significant effects or critical hazards.
Serious eye damage/irritation:	No known significant effects or critical hazards.
Respiratory or skin sensitization:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	No known significant effects or critical hazards.
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties:	No additional data.
Additional information:	No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards.

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:

Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:
None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

Europe inventory:

All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
-

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Hybridization 1

Trade name: Hybridization 1

Product no.: OCT10

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
GHS07 - Causes serious eye irritation.

2.2 Label elements CLP no. 1272/2008:

Hazard pictograms:

Signal word:
Warning

Hazard statements:
GHS07 - Causes serious eye irritation.

Precautionary statements:
Prevention:
P280 - Wear eye or face protection.
P264 - Wash hands thoroughly after handling.

Response:
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:
Keep container tightly closed.

Disposal:
P501 Dispose of contents/ container in accordance with national regulations.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS/EC-no.	REACH-no.	Name	Content %	Classification CLP
EC: 231-598-3 CAS: 7647-14-5	-	Sodium chloride	≥10 - ≤25	Eye Irrit. 2, H319

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information:
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 10 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. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness.

Ingestion: Wash out mouth with water. Remove dentures if any.
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if 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.

4.2 Most important symptoms and effects, both acute and delayed:
Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
None known.

5.2 Special hazards arising from the substance or mixture:
In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
- phosphorus oxides
- halogenated compounds
- metal oxide/oxides

5.3 Advice for firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas.
Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

Respiratory protection:

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

Hand protection:

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

Eye protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Not available	**Odor:** Not available	**PH:** 7.4	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** Not available	**Vapor pressure:** Not available	**Density:** 0.9-1.1	**Melting point:** Not available
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions:

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products:

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	SureSelect Hyb 1: Sodium chloride Oral – LD50 – Rat - 3000 mg/kg
Skin corrosion/irritation:	Skin - Mild irritant Rabbit - 24 hours 500 milligrams
Serious eye damage/irritation:	Eyes - Moderate irritant Rabbit - 4 hours 100milligrams Eyes - Moderate irritant Rabbit - 10 milligrams
Respiratory or skin sensitisation:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	No known significant effects or critical hazards.
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.
11.2 Additional information:	
Endocrine disrupting properties:	No additional data.
Additional information:	Routes of entry anticipated: Oral, Dermal, Inhalation.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
Acute EC50 28.85 mg/dm3 Fresh water	Algae - Pseudokirchneriella	72 hours
Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days

Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential:
Not applicable.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Sources:

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:
None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not aplicable.

Europe inventory:
All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Eye Irrit. 2 -- Eye Irritation, category 2

Summary of hazard statements in section 3:
H319 - Causes serious eye irritation

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Hybridization 2

Trade name: Hybridization 2

Product no.: OCT11

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties

according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS/EC-no.	REACH-no.	Name	Content %	Classification CLP
EC: 205-358-3 CAS: 139-33-3	-	Disodium dihydrogen ethylenediaminetetraacetate	≥10 - ≤25	Acute Tox. 4, H302

Substance classified with a health or environmental hazard.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:

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

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
None known.

5.2 Special hazards arising from the substance or mixture:
In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- metal oxide/oxides

5.3 Advice for firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

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

6.3 Methods and material for containment and cleaning up:
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.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

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

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	**Color:**	**Odor:**	**PH:**	**Viscosity:**
Liquid	Not available	Not available	8,0	Not available
Flashpoint:	**Boiling point:**	**Vapor pressure:**	**Density:**	**Melting point:**
Not available	Not available	Not available	Not available	Not available
Thermal decomposition:	**Auto-ignition:**	**Explosive limits**	**Solubility in water:**	
Not available	Not applicable	Not applicable	Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity: SureSelect Hyb 2: Disodium dihydrogen ethylenediaminetetraacetate
Oral – LD50 – Rat - 2 g/kg
Oral – ATE value 13698.6 mg/kg

Skin corrosion/irritation: No known significant effects or critical hazards.

Serious eye damage/irritation: No known significant effects or critical hazards.

Respiratory or skin sensitization: No known significant effects or critical hazards.

Germ cell mutagenicity: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Specific target organ toxicity - single exposure: No known significant effects or critical hazards.

Specific target organ toxicity – repeated exposure: No known significant effects or critical hazards.

Aspiration hazard: No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties: No additional data.

Additional information: Routes of entry anticipated: Oral, Dermal, Inhalation.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	Acute LC50 320 mg/l Fresh water Fish	96 hours

12.2 Persistence and degradability:

Not available.

12.3 Bioaccumulative potential:

Name	LogPow BCF Potential	LogPow BCF Potential	LogPow BCF Potential
SureSelect Hyb 2 Disodium dihydrogen ethylenediaminetetraacetate	-4.3	1.8	low

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:

This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:

Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:
None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

Europe inventory:
All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Acute Tox. 4 (Oral) -- Acute toxicity oral, category 4

Summary of hazard statements in section 3:
H302 - Harmful if swallowed

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Hybridization 3

Trade name: Hybridization 3

Product no.: OCT12

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS-no:	Name:	Limits:
-	-	-

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture:

In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- halogenated compounds
- carbonyl halides

5.3 Advice for firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

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

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

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Not available	**Odor:** Not available	**PH:** 7,0 to 8,0	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** 100º C	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** 0º C
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	No known significant effects or critical hazards.
Skin corrosion/irritation:	No known significant effects or critical hazards.
Serious eye damage/irritation:	No known significant effects or critical hazards.
Respiratory or skin sensitization:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	No known significant effects or critical hazards.
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties:	No additional data.
Additional information:	No additional data.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards.

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:
None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Europe inventory:
All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
-

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier Hybridization 4

Trade name: Hybridization 4

Product no.: OCT13

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS/EC-no.	REACH-no.	Name	Content %	Classification CLP
EC: 205-788-1 CAS: 8012-56-4	-	SureSelect Hyb 4 Sulfuric acid monododecyl ester sodium salt (1:1)	≤3	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412

Substance classified with a health or environmental hazard.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
None known.

5.2 Special hazards arising from the substance or mixture:
In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- sulfur oxides
- metal oxide/oxides

5.3 Advice for firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

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

6.3 Methods and material for containment and cleaning up:
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.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

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

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

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
-	-	-

This product does not contain ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and

should be approved by a specialist before handling this product.

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

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Not available	**Odor:** Not available	**PH:** 5,2 to 6,2	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** 100º C	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** 0º C
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	SureSelect Hyb 4: Disodium dihydrogen ethylenediaminetetraacetate Oral – LD50 – Rat - 1288 mg/kg Oral – ATE value 128800 mg/kg Inhalation (dusts and mists) – ATE value 150 mg/l
Skin corrosion/irritation:	No known significant effects or critical hazards.
Serious eye damage/irritation:	No known significant effects or critical hazards.
Respiratory or skin sensitization:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	SureSelect Hyb 4: Sulfuric acid monododecyl ester sodium salt (1:1) Category 3 - Respiratory tract irritation
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties:	No additional data.
Additional information:	Routes of entry anticipated: Oral, Dermal, Inhalation

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards.

12.2 Persistence and degradability:
Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Sources:
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:

None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

Europe inventory:
All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400 ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Summary of hazard statements in section 3:
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences

Safety data sheet
NB-62-0001
Version 1.0
Effective date: 18-01-2024

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier RNase Block

Trade name: RNase Block

Product no.: OCT14

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Research use only

1.3 Details of the Supplier of the safety data sheet:

Company:
Manufacturer/Distributor

NEO BIOTECH
74 Rue des Suisses, 92000 Nanterre
France
Tel: +33 9 77 40 09 09
E-mail: tech@neo-biotech.com

1.4 Emergency telephone number:

European (EU) emergency number: 112
American (USA) emergency number: 911
CHEMTREC emergency number: North America +1-800-424-9300 (toll free)
Asia emergency number: 110
Australia emergency number: 000
All numbers are available 24/7/365

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP no. 1272/2008.
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements CLP no. 1272/2008:

Signal word:
No signal word.

Hazard statements:
Not applicable.

Precautionary statements:
Not applicable.

Additional labeling:
Not applicable.

2.3 Other Hazards.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:
This product is a mixture (see point 3.2).

3.2 Mixture:

CAS/EC-no.	REACH-no.	Name	Content %	Classification CLP
EC: 200-289-5 CAS: 56-81-5	-	SureSelect RNase Block Glycerol	≥50 - ≤75	Not classified.

Substance with a workplace exposure limit.

3.3 Additional information:
See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information: No action shall be taken involving any personal risk or without suitable training.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:
No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture:

In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide

5.3 Advice for firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

6.2 Environmental precautions:

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

6.3 Methods and material for containment and cleaning up:

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.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue and can be hazardous. Do not reuse container.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities:

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

7.3 Specific end use(s): Industrial applications, Professional applications.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

CAS-no:	Name:	Limits:
CAS: 56-81-5	SureSelect RNase Block Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011) TWA: 10 mg/m³ 8 hours. Form: Mist

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNEL:
No DNELs/DMELs available.

PNEC:
No PNECs available.

8.2 Exposure controls

Appropriate technical measures:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General information / Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.
Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

8.3 Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Liquid	**Color:** Not available	**Odor:** Not available	**PH:** Not available	**Viscosity:** Not available
Flashpoint: Not available	**Boiling point:** Not available	**Vapor pressure:** Not available	**Density:** Not available	**Melting point:** Not available
Thermal decomposition: Not available	**Auto-ignition:** Not applicable	**Explosive limits** Not applicable	**Solubility in water:** Easily soluble in the following materials: - cold water - hot water	

9.2 Other information:
No additional information.

SECTION 10. STABILITY AND REACTIVITY

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity:	No known significant effects or critical hazards.
Skin corrosion/irritation:	No known significant effects or critical hazards.
Serious eye damage/irritation:	No known significant effects or critical hazards.
Respiratory or skin sensitization:	No known significant effects or critical hazards.
Germ cell mutagenicity:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Reproductive toxicity:	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure:	No known significant effects or critical hazards.
Specific target organ toxicity – repeated exposure:	No known significant effects or critical hazards.
Aspiration hazard:	No known significant effects or critical hazards.

11.2 Additional information:

Endocrine disrupting properties:	No additional data.
Additional information:	Routes of entry anticipated: Oral, Dermal, Inhalation

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No known significant effects or critical hazards.

12.2 Persistence and degradability:

Not available.

12.3 Bioaccumulative potential: No known significant effects or critical hazards.

12.4 Mobility in soil: Not available.

12.5 Result of PBT and vPvB assesment:
This product does not contain any substances that are assessed to be a PBT. This product does not contain any substances that are assessed to be a vPvB.

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

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times 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 disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Contaminated packing: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. TRANSPORT INFORMATION

Regulatory information ADR/RID / IMDG / IATA:
Not regulated.

14.1 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.

14.2 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization:
None of the components are listed.

Substances of very high concern:
None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

Europe inventory:
All components are listed or exempted.

National regulations Seveso Directive
This product is not controlled under the Seveso Directive.

Additional information: -

15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Abbreviations and Acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of H-phrases as mentioned in section 3:
-

Additional information:
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by: CliniSciences