

SAFETY DATA SHEET

This document is in compliance with requirements for Safety Data Sheets implemented under U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2024 and equivalent State Standards), guidelines from the United Nations Globally Harmonized System of Classification of Chemicals (GHS), the Canadian Workplace Hazardous Materials Information System (WHMIS) and Hazardous Products Regulations (HPR), and the European Union regulation on the Classification, Labelling and Packaging of Substances and Mixtures (EC No. 1272/2008, EU 2020/878) and the standards of other nations. See section 16 for more information on national regulations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

- **PRODUCT NAME:** SORTASE
- **PRODUCT CODE:** 806-00078-00

1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Kit component for protein sequencing process.
- **USES ADVISED AGAINST:** Procedures not related to the intended use of this product.
- **IDENTIFIED USERS:** For sale to, use, and storage by personnel trained in handling product safely.

1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER:** Quantum SI, Inc.
- **ADDRESS:** 29 Business Park Dr., Suite C; Branford, CT; 06405
- **BUSINESS PHONE:** 866-688-7374 (8:00 am to 5:00 pm, Eastern Standard Time)
- **EMERGENCY PHONE:** +1- Chemtrec (US and Canada): +1-800-424-9300
Outside US): +1-703- 527-3887
- **Email:** support@quantum-si.com

SECTION 2: HAZARD IDENTIFICATION

2.1 HAZARD CLASSIFICATION (US OSHA, CANADIAN WHMIS, and EU CLP)

- Not classified as hazardous under pertinent national standards.

2.2 LABEL ELEMENTS (US OSHA, CANADIAN WHMIS, and EU CLP)

- **Hazard Pictograms:** Not applicable.
- **Signal Word:** Not applicable.
- **Hazard Statements:** Not applicable.
- **Precautionary Statements:** Not applicable.

2.3 OTHER PERTINENT DATA ON HEALTH, PHYSICAL, AND ENVIRONMENTAL HAZARDS

- Not applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 IDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

NAME	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w) ¹
Sortase	Not applicable.	Non-hazardous enzyme.	<0.1%
Glycerol	56-81-5	Not hazardous.	10-30%

¹ The exact composition is a trade secret. All required hazard and safety information has been provided for the products, per the regulations.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

- BASIC FIRST AID BY EXPOSURE ROUTE:**

<u>AREA EXPOSED</u>	<u>TREATMENT</u>
---------------------	------------------

Eye Contact:	Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention should any irritation develop.
---------------------	---

Skin Contact:	Flush area with warm, running water for several minutes. Seek medical attention should any irritation develop.
----------------------	--

Inhalation:	Obtain fresh air. Seek medical attention if irritation develops after exposure ends.
--------------------	--

Ingestion:	If conscious only: Rinse mouth with water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.
-------------------	---

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- ACUTE HEALTH EFFECTS:**

<u>AREA EXPOSED</u>	<u>EFFECTS</u>
---------------------	----------------

Eye Contact:	May cause eye irritation upon prolonged exposure.
---------------------	---

Skin Contact:	May cause skin irritation upon prolonged exposure.
----------------------	--

Inhalation:	Not anticipated to be a potential route of exposure.
--------------------	--

Ingestion:	Not anticipated to be a potential route of exposure.
-------------------	--

- CHRONIC HEALTH EFFECTS:** None known.

- TARGET ORGANS:** None known.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.

- RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.

- MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None known.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

- RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Dry Powder, Foam, Carbon Dioxide, or any other type.

- UNSUITABLE FIRE EXTINGUISHING MEDIA:** None.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- NFPA FLAMMABILITY CLASSIFICATION:**

NFPA Rating:



NFPA Hazard Classification: Not classified.

5.3 UNUSUAL HAZARDS IN FIRE SITUATIONS

<u>POTENTIAL HAZARD</u>	<u>DESCRIPTION FOR PRODUCT</u>
-------------------------	--------------------------------

Decomposition:	Generates irritating vapors, carbon monoxide, and carbon dioxide
-----------------------	--

Incompatibilities:	See Section 10 (Reactivity and Stability).
---------------------------	--

Explosion Sensitivity to Mechanical Impact:	Not applicable.
--	-----------------

Explosion Sensitivity to Static Discharge:	Not applicable.
---	-----------------

SECTION 5: FIREFIGHTING MEASURES (Continued)

5.4 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material. Subsequently, personnel can follow the instructions for incidental releases.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Use damp sponge or polypad to carefully cleanse contaminated area or items. If appropriate, further clean contaminated area and equipment with soap and water solution, followed by a water rinse.

6.2 ENVIRONMENTAL PRECAUTIONS

- **IN CASE OF SPILL:** Collect spillage promptly. Avoid response actions that can cause a release of a significant amount of substance into the environment. Avoid accidental dispersal of spilled material into soil, waterways, and sewers.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or sponge. Appropriate waste container.

6.4 REFERENCE TO OTHER SECTIONS

- See Section 8 (Exposure Controls/Personal Protection) for personal protective equipment recommendations.
- See Section 13 (Disposal Recommendations) for information on waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

- **HYGIENE PRACTICES:** Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists, sprays, or aerosols. Use in a well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
- **HANDLING PRACTICES:** Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** Ensure all containers are correctly labeled. Store containers away from direct sunlight and sources of intense heat. Store this product away from incompatible chemicals. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual material; therefore, empty containers should be handled with care.
- **INCOMPATIBILITIES:** See Section 10 (Stability and Reactivity).

7.3 SPECIFIC END USES

- This product is for use in protein sequencing processes by trained laboratory personnel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**
 - **U.S:** No airborne occupational exposure limits have been established.
 - **Canada:** No airborne occupational exposure limits have been established.
 - **EU:** No airborne occupational exposure limits have been established.
 - **AUSTRALIA OEL:** Glycerol = 10 mg/m³
 - **MEXICO OEL:** Glycerol = 10 mg/m³
 - **GREECE OEL:** Glycerol = 10 mg/m³
 - **SPAIN OEL:** Glycerol = 10 mg/m³
- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** None established.
- **DERIVED NO EFFECTS LEVEL:** The following levels have been established for the components of this product:
 - **GLYCEROL:** 56 mg/m³ is listed for chronic local effects via inhalation for workers in industry.
- **PREDICTED NO EFFECT CONCENTRATION:** The following data are available for the components of this product:
 - **GLYCEROL:** Aquatic Environment - Freshwater: 0.885 mg/L, Marine water: 0.088 mg/L. Sediment - Freshwater sediment: 3.3 mg/kg; Marine sediment: 0.33 mg/kg. Terrestrial Environment: Soil: 0.141 mg/kg. Sewage Treatment Plant: 1000 mg/L

8.2 EXPOSURE CONTROLS

- **GENERAL GUIDELINES:** This product is intended for use by trained personnel as part of a kit.
- **ENGINEERING CONTROLS:** Ensure the area has adequate ventilation to ensure minimal inhalation of mists or sprays occurs. Eye wash stations and safety showers should be readily available.
- **RESPIRATORY PROTECTION:** None needed under normal circumstances of use.
- **HAND PROTECTION:** None typically needed for anticipated use. Neoprene or nitrile gloves are recommended if skin contact can occur (e.g., spill clean-up). Ensure gloves are intact prior to use.
- **EYE PROTECTION:** Safety glasses are recommended if splash or spray can occur during use (e.g., during refilling of unit).
- **BODY PROTECTION:** Body protection suitable to task is recommended (e.g., laboratory coat).
- **OTHER PROTECTIVE MEASURES:** Wash hands during breaks and at the end of handling the material. Immediately remove any contaminated clothing.

8.3 ENVIRONMENTAL EXPOSURE CONTROLS

- Minimize the generation of mists, sprays, or aerosols while using this product. Avoid release into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

<u>PROPERTY</u>	<u>DATA</u>
State:	Liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	Not determined
pH:	Not applicable.

- **PHYSICAL DATA:**

<u>PROPERTY</u>	<u>DATA</u>
Melting Point/Freezing Point:	Not determined.
Initial Boiling Point/Boiling Range:	Not determined.
Flash Point:	Not applicable.
Evaporation Rate (Water = 1):	Approximately 1.0
Flammability:	Not applicable.
Upper/Lower Explosion Limits	Not applicable.
Vapor Pressure:	Not determined.
Vapor Density	Not determined.
Relative Density at 20 °C (68 °F)	Not determined.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Solubility:	Totally soluble in water
Partition Coefficient/n-octanol/water:	Not determined
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not determined.
Kinematic Viscosity:	Not determined.
Particle Characteristics:	Not applicable.

9.2 INFORMATION RELEVANT TO PHYSICAL HAZARD CLASSIFICATION

- **Information regarding Physical Hazard Classes** This product is not classified under any physical hazard class.
- **Other Safety Characteristics** Not applicable

9.3 INFORMATION RELEVANT TO PHYSICAL HAZARD CLASSIFICATION

- **VOC content:** 0.00%; 0.0 g/L

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY AND CHEMICAL STABILITY

- The product is not reactive under typical conditions of use or handling.
- Normally stable under standard temperatures and pressures.

10.2 POSSIBILITY OF HAZARDOUS REACTIONS (INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCY)

- Product is not self-reactive, water-reactive, or air-reactive; it will not undergo hazardous polymerization.

10.3 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals and adverse storage conditions.

10.4 INCOMPATIBLE MATERIALS

- Strong oxidizing agents.

10.5 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition include carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON ACUTE TOXICITY

- **PRODUCT TOXICOLOGY DATA:** The following are calculated estimates for the product:
 - Acute Toxicity Estimate (Oral) > 5000 mg/kg
 - Acute Toxicity Estimate (Dermal) > 5000 mg/kg
 - Acute Toxicity Estimate (Inhalation) > 5 mg/L (dusts and mists)
- **COMPONENT TOXICOLOGY DATA:** The following data are available for components of this product:
 - GLYCEROL**
LD 50 (oral, rat) = 27200 mg/kg
LC50 (dermal, guinea pig) = 45 mL/kg
L50 (Inhalation, rat) = 5.8 mg/L
- **DEGREE OF IRRITATION:** This product is not anticipated to cause skin or eye irritation.
- **SENSITIZATION:** This product does not contain any compound reported to as a skin or respiratory sensitizer.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazard Information) and Section 4 (First-Aid Measures) for additional details.
 - **Eyes:** May cause eye irritation upon prolonged exposure.
 - **Skin:** May cause skin irritation upon prolonged exposure.
 - **Inhalation:** Not anticipated to be a significant route of occupational exposure.
 - **Ingestion:** Not anticipated to be a significant route of occupational exposure.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

11.2 INFORMATION ON CHRONIC TOXICITY

- **CARCINOGENICITY STATUS:** This product is not listed as a carcinogen by NTP, IARC, or OSHA.
- **REPRODUCTIVE TOXICITY INFORMATION:** Not applicable.
- **MUTAGENIC EFFECTS** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

11.3 OTHER USEFUL TOXICOLOGY INFORMATION

- **ENDOCRINE-DISRUPTING PROPERTIES:** Not applicable.
- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL TOXICITY

- The following aquatic toxicity data are available for the components of this product.

GLYCEROL

LC50: 54000 mg/l, Oncorhynchus mykiss
EC50 >10,000 mg/L, Daphnia magna

12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.
- The following data are available for the components of this product:

GLYCEROL

Log Kow = -1.75 (pH value: 7.4, 25 °C)
Not anticipated to bioaccumulate significantly.

12.4 MOBILITY IN SOIL

- Based on its total solubility in water, this product is expected to have significant mobility in soil.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

- Not classified as PBT or vPvB.

12.6 ENDOCRINE DISRUPTING PROPERTIES

- None reported.

12.7 OTHER ADVERSE ENVIRONMENTAL EFFECTS

- None reported.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, state, and national regulations.

13.2 DISPOSAL CONSIDERATIONS

- **SEWAGE DISPOSAL:** Waste should not be disposed of by release to sewers.
- **EPA RCRA WASTE CODE:** Not applicable to wastes consisting only of this product.

13.3 DISPOSITION OF EMPTY CONTAINERS

- Empty containers may contain residual material; therefore, empty containers should be handled with care.
- Empty containers should be discarded properly.

SECTION 14: TRANSPORT INFORMATION

14.1 HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS

- **IATA DESIGNATION:** Product is not regulated as a dangerous good by the International Air Transport Association.
- **IMO DESIGNATION:** Product is not regulated as a dangerous good by the International Maritime Organization.
- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION						

- **CANADIAN TRANSPORTATION INFORMATION:** This product is not regulated by Transport Canada as dangerous
- **EUROPEAN TRANSPORT CLASSIFICATION BY ROAD (ADR)/RAIL (RID):** Product is not regulated as a dangerous good.

14.2 ENVIRONMENTAL HAZARDS

- None known.

14.3 SPECIAL PRECAUTIONS FOR TRANSPORTERS

- None established.

14.4 TRANSPORT IN BULK

- **ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:** Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 EUROPEAN UNION SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.2 EUROPEAN UNION CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been conducted for Glycerol.

15.3 ARGENTINA: PERTINENT REGULATIONS

- **STANDARD IRAM 41400-AR (Chemical Products - Safety Data Sheet):** This safety data sheet is prepared in accordance with the requirements of Argentina.
- **Carcinogenic Substances and Agents Registry:** Not applicable.
- **Control of Precursors and Essential Chemicals for the Preparation of Drugs:** Not applicable.

15.4 AUSTRALIA: PERTINENT REGULATIONS

- **National Code of Practice for the Preparation of Safety Data Sheets [NOHSC:2011(2003)]:** This safety data sheet is prepared in accordance with the requirements of Australia.
- **Australian Inventory of Industrial Chemicals (AIIC):** Glycerol is listed.

15.5 BRAZIL: PERTINENT REGULATIONS

- **ABNT NBR 14725:2023 – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals:** This safety data sheet is prepared in accordance with the requirements of Brazil.
- **National List of Carcinogenic Agents for Humans - (LINACH):** Not applicable.
- **List of Chemicals Controlled by the Federal Police:** Not applicable.

15.6 CHILE: PERTINENT REGULATIONS

- **NCh 2245:2021 (Chemical Product Safety Data Sheet – Order and Content of Sections):** This safety data sheet is prepared in accordance with the requirements of Chile.
- **Chilean Chemical Inventory established under Decree 57/2019 –** Glycerol is not listed. This product is used for laboratory research and development purposes.

SECTION 15: REGULATORY INFORMATION (Continued)

15.7 INDIA: PERTINENT REGULATIONS

- Schedule 9 – The Manufacture, Storage, and Import of Hazardous Chemicals Rule, 1989: This safety data contains all information required under the regulations in India.
- List of Hazardous and Toxic Chemicals – Not applicable.

15.8 ISRAEL: PERTINENT REGULATIONS

- Israel Standard 2302-1 (2004) – Classification, Packaging, Labeling, and Marking of Dangerous Materials: This safety data contains all information required under the regulations in Israel.

15.9 MEXICO: PERTINENT REGULATIONS

- NOM-018-STPS-2015] – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals: This safety data sheet is prepared in accordance with the requirements of Mexico.
- Mexican Inventory of Chemical Substances: Glycerol is not listed. This product is used for laboratory research and development purposes.

15.10 QATAR AND UNITED ARAB EMIRATES: PERTINENT REGULATIONS

- Gulf Standardization Organization Technical Order 2654:2021 9 – The Global Harmonized System (GHS) in Gulf Cooperation Council (GCC) countries: This safety data sheet is prepared in accordance with the requirements of the Gulf States.

15.11 SINGAPORE: PERTINENT REGULATIONS

- Singapore Standard SS 586-3:2022 9 – Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods: This safety data sheet is prepared in accordance with the requirements of Singapore.
- Controlled Hazardous Substances List maintained by National Environment Agency: No product component is listed.
- Singapore Ozone-Depleting Substances List: No product component is listed.

15.12 OTHER IMPORTANT U.S. SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **US TOXICITY SUBSTANCES CONTROL INVENTORY:** Glycerol is listed.
- **U.S. SARA THRESHOLD PLANNING QUANTITY:** Not applicable.
- **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** Not applicable.
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable to the product, based on composition and volume.
- **U.S. SARA TITLE 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313
- **US CLEAN AIR ACT (SECTION 112r):** Not applicable.

15.13 OTHER IMPORTANT U.S. STATE REGULATIONS FOR COMPONENTS

- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **NEW JERSEY RIGHT TO KNOW LIST HAZARDOUS SUBSTANCES LIST:** No product ingredient is listed.
- **NEW JERSEY ENVIRONMENTAL SUBSTANCES LIST:** No product ingredient is listed.
- **PENNSYLVANIA RIGHT-TO-KNOW LIST:** No product ingredient is listed.

15.14 CANADIAN AND EU SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **ADDITIONAL WHMIS INFORMATION:** This SDS contains all the required elements under the Canadian Hazardous Products regulations (SOR 2022-272).
- **CANADIAN DSL/NDL INVENTORY STATUS:** All components of this product are listed or exempted.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priority Substances Lists.
- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.15 CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been carried out.

SECTION 15: REGULATORY INFORMATION (Continued)

15.16 **SOUTH KOREA: PERTINENT REGULATIONS**

- Public Notice No. 2016-19 9 – Standards for Classification and/or Labeling of Chemicals and for Materials Safety Data Sheets: This safety data sheet is prepared in accordance with the requirements of South Korea,
- Korean Existing Chemical Substances List: Glycerol is listed. This product is used for laboratory research and development purposes.
- Korea Priority Existing Chemicals List (PEC): Glycerol is not listed.
- List of Toxic Chemical Substances: Glycerol is not listed.

15.17 **TAIWAN: PERTINENT REGULATIONS**

- Regulations of Labelling and Communication of Hazardous Chemicals (Directive of the Executive Yuan Council of Labor Affairs, Labor Affairs No. 10302007861: This safety data sheet is prepared in accordance with the requirements of Taiwan.
- Chemical Substance Inventory in Taiwan, China (TCSI): Glycerol is listed. This product is used for laboratory research and development purposes.

15.18 **THAILAND: PERTINENT REGULATIONS**

- Hazard Classification and Communication System of Hazardous Substances B.E.2555 (2012): This safety data sheet has been prepared in accordance with Thai requirements.
- Thailand Existing Chemicals Inventory (TECI): Glycerol is listed. This product is used for laboratory research and development purposes.

15.19 **TURKEY: PERTINENT REGULATIONS**

- Annex 2 Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması" (KKDİK/Registration, Evaluation, Authorization and Restriction of Chemicals): This safety data sheet has been prepared in accordance with the requirements of Turkey.
- Chemical Inventory of Turkey per KKDİK: Glycerol is not listed. This product is used for laboratory research and development purposes.

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE

- **DATE OF PREPARATION:** November 25, 2024
- **SUPERCEDES:** Not applicable.
- **CHANGE INDICATED:** New product.

16.2 HAZARDOUS MATERIALS SYSTEM RATING

Health	0	
Flammability	0	<i>(Personal Protective Equipment Rating: Occupational Use situations: Refer to section 8 for guidance on the selection of personal production.</i>
Physical Hazard	0	
Protective Equipment	*	

16.3 DEFINITIONS

SECTION	EXPLANATION OF TERMS/ABBREVIATIONS
ALL	<u>EU</u> : European Union. <u>CLP</u> : Union Classification, Labelling, and Packaging of Substances and Mixtures
ALL	<u>OSHA</u> : U.S. Federal Occupational Safety and Health Administration. <u>WHMIS</u> : Canadian Workplace Hazardous Materials Standard. <u>GHS</u> : Globally Harmonized System of Classification of Chemical Substances. <u>HCS</u> : Hazard Communication Standard (U.S.). <u>HPR</u> : Hazardous Products Regulations (Canada). <u>EU</u> : European Union. <u>CLP</u> : Union Classification, Labelling and Packaging of Substances and Mixtures
3	<u>CAS Number</u> : Chemical Abstract Service Number, used by the American Chemical Society to uniquely identify a chemical.
5	<u>NFPA</u> : National Fire Protection Association. <u>NFPA FLAMMABILITY CLASSIFICATION</u> : The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. <u>NFPA HAZARDOUS MATERIALS RATING</u> : This is a rating system used to summarize physical and health hazards to firefighters Blue = Health hazard; Red = Fire Hazard; Yellow = Reactivity Hazard. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.
8	<u>ACGIH</u> : American Conference of Government Industrial Hygienists; <u>TWA</u> : Time-Weighted Average (over an 8-hour workday); <u>STEL</u> : Short-Term Exposure Limit (15-minute average, no more than 4 times daily and each exposure separated by one hour minimally); <u>C</u> : Ceiling Limit (concentration not to be exceeded in a work environment). <u>PEL</u> : Permissible Exposure Limit. <u>NIOSH</u> : National Institute of Occupational Safety and Health; <u>REL</u> : Recommended Exposure Limit; <u>IDLH</u> : Immediately Dangerous to Life and Health <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter. <u>BEI</u> : Biological Exposure Limit. <u>MAK</u> : Maximum Concentration Values in the Workplace; <u>AIHA WEEL</u> : AIHA WEEL – American Industrial Hygiene Association Workplace Environment Exposure Levels; <u>OEL</u> : Occupational Exposure Limit.
8	<u>OEL</u> : Occupational Exposure Limit. <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter.
9	<u>pH</u> : Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, a pH value of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. <u>FLASH POINT</u> : Temperature at which a liquid generates enough flammable vapors so that ignition may occur. <u>AUTOIGNITION TEMPERATURE</u> : Temperature at which spontaneous ignition occurs. <u>LOWER EXPLOSIVE LIMIT (LEL)</u> : The minimal concentration of flammable vapors in air which will sustain ignition. <u>UPPER EXPLOSIVE LIMIT (UEL)</u> : The maximum concentration of flammable vapors in air which will sustain ignition.
11	<u>CARCINOGENICITY STATUS</u> : <u>NTP</u> : National Toxicology Program. <u>IARC</u> : International Agency for Research on Cancer. <u>TOXICOLOGY DATA</u> : <u>LD_{xx}</u> or <u>LC_{xx}</u> : The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designated route of administration. This value is used to assess the toxicity of chemical substances to humans. <u>TD_{xx}</u> or <u>TC_{xx}</u> : The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designated route of administration.
12	<u>EC₅₀</u> : Effect Concentration. <u>PBT</u> or <u>vPvB</u> : Persistent/ Bioaccumulative /Toxic; Very Persistent/ Very Bioaccumulative
13	<u>RCRA</u> : Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. <u>EPA RCRA Waste Codes</u> : Defined in 40 CFR Section 261.
15	<u>CERCLA</u> : Comprehensive Environmental Response, Compensation, and Liability Act. <u>SARA</u> : Superfund Amendments and Reauthorization Act. <u>TSCA</u> : Toxic Substances Control Act. <u>DSL/NDSL</u> : Domestic Substances List/Non-Domestic Substances List. <u>REACH</u> : European Union regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals.
16	<u>HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING</u> : This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

SAFETY DATA SHEET

This document is in compliance with requirements for Safety Data Sheets implemented under U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2024 and equivalent State Standards), guidelines from the United Nations Globally Harmonized System of Classification of Chemicals (GHS), the Canadian Workplace Hazardous Materials Information System (WHMIS) and Hazardous Products Regulations (HPR), and the European Union regulation on the Classification, Labelling and Packaging of Substances and Mixtures (EC No. 1272/2008, EU 2020/878) and the standard of other nations. See section 16 for more information on national regulations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

- **PRODUCT NAME:** SORTASE BUFFER
- **PRODUCT CODE:** 806-00079-00

1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Kit component for protein sequencing process.
- **USES ADVISED AGAINST:** Procedures not related to the intended use of this product.
- **IDENTIFIED USERS:** For sale to, use, and storage by personnel trained in handling product safely.

1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER:** Quantum SI, Inc.
- **ADDRESS:** 29 Business Park Dr., Suite C; Branford, CT; 06405
- **BUSINESS PHONE:** 866-688-7374 (8:00 am to 5:00 pm, Eastern Standard Time)
- **EMERGENCY PHONE:** +1- Chemtrec (US and Canada): +1-800-424-9300
Outside US): +1-703- 527-3887
- **Email:** support@quantum-si.com

SECTION 2: HAZARD IDENTIFICATION

2.1 HAZARD CLASSIFICATION (US OSHA, CANADIAN WHMIS, and EU CLP)

- Eye irritation (Category 2A).

2.2 LABEL ELEMENTS (US OSHA, CANADIAN WHMIS, and EU CLP)

- **Hazard Pictograms:**



- **Signal Word:** Warning.
- **Hazard Statements:** H319: Causes serious eye irritation
- **Precautionary Statements:** P264: Wash skin thoroughly after handling.
P280: Wear eye protection/ face protection.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/ attention.

2.3 OTHER PERTINENT DATA ON HEALTH, PHYSICAL, AND ENVIRONMENTAL HAZARDS

- Not applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 IDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

NAME	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w) ¹
Calcium Chloride	10043-52-4	Eye irritation (Category 2)	45-70%
Sodium Chloride	7647-14-5	Not hazardous.	10-30%
Tris HCL: Tris(hydroxymethyl)aminomethane hydrochloride	1185-53-1	Not hazardous.	10-30%

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

BASIC FIRST AID BY EXPOSURE ROUTE:

AREA EXPOSED

TREATMENT

Eye Contact:

Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention should any irritation develop.

Skin Contact:

Flush area with warm, running water for several minutes. Seek medical attention should any irritation develop.

Inhalation:

Obtain fresh air. Seek medical attention if irritation develops after exposure ends.

Ingestion:

If conscious only: Rinse mouth with water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

ACUTE HEALTH EFFECTS:

AREA EXPOSED

EFFECTS

Eye Contact:

Can cause serious eye irritation.

Skin Contact:

May cause skin irritation upon prolonged exposure.

Inhalation:

Not anticipated to be a potential route of exposure.

Ingestion:

Not anticipated to be a potential route of exposure.

CHRONIC HEALTH EFFECTS: None known.

TARGET ORGANS: None known.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.
- RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.
- MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None known.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

- RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Dry Powder, Foam, Carbon Dioxide, or any other type.
- UNSUITABLE FIRE EXTINGUISHING MEDIA:** None.

¹ The exact composition is a trade secret. All required hazard and safety information has been provided for the products, per the regulations.

SECTION 5: FIREFIGHTING MEASURES (Continued)

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

NFPA FLAMMABILITY CLASSIFICATION:

NFPA Rating:



NFPA Hazard Classification: Not classified.

5.3 UNUSUAL HAZARDS IN FIRE SITUATIONS

POTENTIAL HAZARD

Decomposition:

Incompatibilities:

Explosion Sensitivity to Mechanical Impact:

Explosion Sensitivity to Static Discharge:

DESCRIPTION FOR PRODUCT

Generates irritating vapors, carbon monoxide, carbon dioxide, and compounds of sodium, calcium, nitrogen, and chlorine.

See Section 10 (Reactivity and Stability).

Not applicable.

Not applicable.

5.4 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material. Subsequently, personnel can follow the instructions for incidental releases.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Use damp sponge or polypad to carefully cleanse contaminated area or items. If appropriate, further clean contaminated area and equipment with soap and water solution, followed by a water rinse.

6.2 ENVIRONMENTAL PRECAUTIONS

- **IN CASE OF SPILL:** Collect spillage promptly. Avoid response actions that can cause a release of a significant amount of substance into the environment. Avoid accidental dispersal of spilled material into soil, waterways, and sewers.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or sponge. Appropriate waste container.

6.4 REFERENCE TO OTHER SECTIONS

- See Section 8 (Exposure Controls/Personal Protection) for personal protective equipment recommendations.
- See Section 13 (Disposal Recommendations) for information on waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

- **HYGIENE PRACTICES:** Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists, sprays, or aerosols. Use in a well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
- **HANDLING PRACTICES:** Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

SECTION 7: HANDLING AND STORAGE (Continue)

7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** Ensure all containers are correctly labeled. Store containers away from direct sunlight and sources of intense heat. Store this product away from incompatible chemicals. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual material; therefore, empty containers should be handled with care.
- **INCOMPATIBILITIES:** See Section 10 (Stability and Reactivity).

7.3 SPECIFIC END USES

- This product is for use in protein sequencing processes by trained laboratory personnel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:** No airborne occupational exposure limits have been established for the components of this product.
- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** None established.
- **DERIVED NO EFFECTS LEVEL:** The following levels have been established for the components of this product:
 - **CALCIUM CHLORIDE:** Worker – Chronic local effects: 10 mg/m³; Chronic systemic effects: 5 mg/m³
 - **SODIUM CHLORIDE:** Inhalation exposure: Chronic systemic effects: 2.069 mg/m³; Acute systemic effects: 2.069 mg/m³. Dermal exposure: Chronic systemic effects: 295.5 mg/kg body weight/day; Acute systemic effects: 295.5 mg/kg body weight/day.
 - **TRIS HCL:** Inhalation exposure: Chronic systemic effects: 162 mg/m³; Dermal exposure: Chronic systemic effects: 216
- **PREDICTED NO EFFECT CONCENTRATION:** The following data is available for the components of this product:
 - **SODIUM CHLORIDE:** Freshwater: PNEC = 5 mg/L; Sewage treatment plant (STP): PNEC = 500 mg/L; Soil: PNEC = 4.86 mg/kg soil dry weight
 - **TRIS HCL:** Sewage treatment plant (STP): PNEC = 300 mg/L;

8.2 EXPOSURE CONTROLS

- **GENERAL GUIDELINES:** This product is intended for use by trained personnel as part of a kit.
- **ENGINEERING CONTROLS:** Ensure the area has adequate ventilation to ensure minimal inhalation of mists or sprays occurs. Eye wash stations and safety showers should be readily available.
- **RESPIRATORY PROTECTION:** None needed under normal circumstances of use.
- **HAND PROTECTION:** None typically needed for anticipated use. Neoprene or nitrile gloves are recommended if skin contact can occur (e.g., spill clean-up). Ensure gloves are intact prior to use.
- **EYE PROTECTION:** Safety glasses are recommended if splash or spray can occur during use (e.g., during refilling of unit).
- **BODY PROTECTION:** Body protection suitable to task is recommended (e.g., laboratory coat).
- **OTHER PROTECTIVE MEASURES:** Wash hands during breaks and at the end of handling the material. Immediately remove any contaminated clothing.

8.3 ENVIRONMENTAL EXPOSURE CONTROLS

- Minimize the generation of mists, sprays, or aerosols while using this product. Avoid release into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

<u>PROPERTY</u>	<u>DATA</u>
State:	Liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	Not determined
pH:	7.5

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (Continue)

- PHYSICAL DATA:

<u>PROPERTY</u>	<u>DATA</u>
Melting Point/Freezing Point:	Not determined.
Initial Boiling Point/Boiling Range:	Not determined.
Flash Point:	Not applicable.
Evaporation Rate (Water = 1):	Approximately 1.0
Flammability:	Not applicable.
Upper/Lower Explosion Limits	Not applicable.
Vapor Pressure:	Not determined.
Vapor Density	Not determined.
Relative Density at 20 °C (68 °F)	Not determined.
Solubility:	Totally soluble in water
Partition Coefficient/n-octanol/water:	Not determined
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not determined.
Kinematic Viscosity:	Not determined.
Particle Characteristics:	Not applicable.

9.2 INFORMATION RELEVANT TO PHYSICAL HAZARD CLASSIFICATION

- Information regarding Physical Hazard Classes: This product is not classified under any physical hazard class.
- Other Safety Characteristics: Not applicable
- VOC content: 0.00%; 0.0 g/L

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY AND CHEMICAL STABILITY

- The product is not reactive under typical conditions of use or handling.
- Normally stable under standard temperatures and pressures.

10.2 POSSIBILITY OF HAZARDOUS REACTIONS (INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCY)

- Product is not self-reactive, water-reactive, or air-reactive; it will not undergo hazardous polymerization.

10.3 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals and adverse storage conditions.

10.4 INCOMPATIBLE MATERIALS

- Strong oxidizing agents.

10.5 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition include carbon oxides, carbon monoxide, carbon dioxide, and compounds of sodium, nitrogen, and chlorine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON ACUTE TOXICITY

- PRODUCT TOXICOLOGY DATA:** The following are calculated estimates for the product:
 - Acute Toxicity Estimate (Oral) > 5000 mg/kg
 - Acute Toxicity Estimate (Dermal) > 5000 mg/kg
 - Acute Toxicity Estimate (Inhalation) > 5 mg/L (dusts and mists)

SECTION 11: TOXICOLOGICAL INFORMATION (Continue)

- **COMPONENT TOXICOLOGY DATA:** The following data are available for components of this product:

CALCIUM CHLORIDE

LD 50 (oral, rat) = 2301 mg/kg
LC50 (dermal, rabbit) > 26400 mL/kg

SODIUM CHLORIDE

LD 50 (oral, rat) = 3000 mg/kg
LC50 (dermal, rabbit) > 10000 mL/kg
L50 (Inhalation, rat) > 42 mg/L

TRIS HCL

LD 50 (oral, rat) > 5000 mg/kg
LC50 (dermal, rabbit) > 5000 mL/kg

- **DEGREE OF IRRITATION:** This product can cause serious eye irritation.
- **SENSITIZATION:** This product does not contain any compound reported to as a skin or respiratory sensitizer.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazard Information) and Section 4 (First-Aid Measures) for additional details.
 - **Eyes:** Can cause serious eye irritation.
 - **Skin:** May cause skin irritation upon prolonged exposure.
 - **Inhalation:** Not anticipated to be a significant route of occupational exposure.
 - **Ingestion:** Not anticipated to be a significant route of occupational exposure.

11.2 INFORMATION ON CHRONIC TOXICITY

- **CARCINOGENICITY STATUS:** This product is not listed as a carcinogen by NTP, IARC, or OSHA.
- **REPRODUCTIVE TOXICITY INFORMATION:** Not applicable.
- **MUTAGENIC EFFECTS** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

11.3 OTHER USEFUL TOXICOLOGY INFORMATION

- **ENDOCRINE-DISRUPTING PROPERTIES:** Not applicable.
- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL TOXICITY

- The following aquatic toxicity data are available for the components of this product.

CALCIUM CHLORIDE

LC50:4630 mg/l, Pimephales promelas, 96 hours
EC50:> 1000 mg/L, Daphnia magna, 48 hours

TRIS HCL

EC50 > 10000 mg/L, Microtoxicity
EC50:> 1000 mg/L, Daphnia magna, 48 hours

SODIUM CHLORIDE

LC50: 7650 mg/l, Pimephales promelas, 96 hours
EC50:> 1000 mg/L, Daphnia magna, 48 hours

12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.
- The following data are available for the components of this product:

TRIS HCL

Log Know = -3.6
Not anticipated to bioaccumulate significantly.

12.4 MOBILITY IN SOIL

- Based on its total solubility in water, this product is expected to have significant mobility in soil.

SECTION 12: ECOLOGICAL INFORMATION (Continue)

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

- Not classified as PBT or vPvB.

12.6 ENDOCRINE DISRUPTING PROPERTIES

- None reported.

12.7 OTHER ADVERSE ENVIRONMENTAL EFFECTS

- None reported.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, state, and national regulations.

13.2 DISPOSAL CONSIDERATIONS

- **SEWAGE DISPOSAL:** Waste should not be disposed of by release to sewers.
- **EPA RCRA WASTE CODE:** Not applicable to wastes consisting only of this product.

13.3 DISPOSITION OF EMPTY CONTAINERS

- Empty containers may contain residual material; therefore, empty containers should be handled with care.
- Empty containers should be discarded properly.

SECTION 14: TRANSPORT INFORMATION

14.1 HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION						

- **CANADIAN TRANSPORTATION INFORMATION:** This product is not regulated by Transport Canada as dangerous good.
- **EUROPEAN TRANSPORT CLASSIFICATION BY ROAD (ADR)/RAIL (RID):** Product is not regulated as a dangerous good.
- **IATA DESIGNATION:** Product is not regulated as a dangerous good by the International Air Transport Association.
- **IMO DESIGNATION:** Product is not regulated as a dangerous good by the International Maritime Organization.

14.2 ENVIRONMENTAL HAZARDS

- None known.

14.3 SPECIAL PRECAUTIONS FOR TRANSPORTERS

- None established.

14.4 TRANSPORT IN BULK

- **ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:** Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 OTHER IMPORTANT U.S. SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **US TOXICITY SUBSTANCES CONTROL INVENTORY:** The components of this product are listed.
- **U.S. SARA THRESHOLD PLANNING QUANTITY:** Not applicable.
- **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** Eye Damage/Irritation.
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable to the product, based on composition and volume.
- **U.S. SARA TITLE 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313
- **US CLEAN AIR ACT (SECTION 112r):** Not applicable.

15.2 OTHER IMPORTANT U.S. STATE REGULATIONS FOR COMPONENTS

- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **NEW JERSEY RIGHT TO KNOW LIST HAZARDOUS SUBSTANCES LIST:** No product ingredient is listed.
- **NEW JERSEY ENVIRONMENTAL SUBSTANCES LIST:** No product ingredient is listed.
- **PENNSYLVANIA RIGHT-TO-KNOW LIST:** No product ingredient is listed.

15.3 CANADIAN AND EU SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **ADDITIONAL WHMIS INFORMATION:** This SDS contains all the required elements under the Canadian Hazardous Products Regulations (SOR 2022-272).
- **CANADIAN DSL/NDL INVENTORY STATUS:** All components of this product are listed or exempted.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priority Substances Lists.
- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.4 EUROPEAN UNION SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.5 EUROPEAN UNION CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been conducted.

15.6 ARGENTINA: PERTINENT REGULATIONS

- **STANDARD IRAM 41400-AR (Chemical Products - Safety Data Sheet):** This safety data sheet is prepared in accordance with the requirements of Argentina.
- **Carcinogenic Substances and Agents Registry.** Not applicable.
- **Control of Precursors and Essential Chemicals for the Preparation of Drugs:** Not applicable.

15.7 AUSTRALIA: PERTINENT REGULATIONS

- **National Code of Practice for the Preparation of Safety Data Sheets [NOHSC:2011(2003)]:** This safety data sheet is prepared in accordance with the requirements of Australia.
- **Australian Inventory of Industrial Chemicals (AIIC):** Sodium Chloride, Calcium Chloride, and Tris HCl are listed.

15.8 BRAZIL: PERTINENT REGULATIONS

- **ABNT NBR 14725:2023 – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals:** This safety data sheet is prepared in accordance with the requirements of Brazil.
- **National List of Carcinogenic Agents for Humans - (LINACH):** Not applicable.
- **List of Chemicals Controlled by the Federal Police:** Not applicable.

15.9 CHILE: PERTINENT REGULATIONS

- **NCh 2245:2021 (Chemical Product Safety Data Sheet – Order and Content of Sections):** This safety data sheet is prepared in accordance with the requirements of Chile.
- **Chilean Chemical Inventory established under Decree 57/2019 – Sodium Chloride and Calcium Chloride are currently listed.** This product is used for laboratory research and development purposes.

SECTION 15: REGULATORY INFORMATION (Continue)

15.10 INDIA: PERTINENT REGULATIONS

- Schedule 9 – The Manufacture, Storage, and Import of Hazardous Chemicals Rule, 1989: This safety data contains all information required under the regulations in India.
- List of Hazardous and Toxic Chemicals – Not applicable.

15.11 ISRAEL: PERTINENT REGULATIONS

- Israel Standard 2302-1 (2004) – Classification, Packaging, Labeling, and Marking of Dangerous Materials: This safety data contains all information required under the regulations in Israel.

15.12 MEXICO: PERTINENT REGULATIONS

- NOM-018-STPS-2015] – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals: This safety data sheet is prepared in accordance with the requirements of Mexico.
- Mexican Inventory of Chemical Substances: Sodium Chloride and Calcium Chloride are listed.

15.13 QATAR AND UNITED ARAB EMIRATES: PERTINENT REGULATIONS

- Gulf Standardization Organization Technical Order 2654:2021 9 – The Global Harmonized System (GHS) in Gulf Cooperation Council (GCC) countries: This safety data sheet is prepared in accordance with the requirements of the Gulf States.

15.14 SINGAPORE: PERTINENT REGULATIONS

- Singapore Standard SS 586-3:2022 9 – Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods: This safety data sheet is prepared in accordance with the requirements of Singapore.
- Controlled Hazardous Substances List maintained by National Environment Agency: No product component is listed.
- Singapore Ozone-Depleting Substances List: No product component is listed.

15.15 SOUTH KOREA: PERTINENT REGULATIONS

- Public Notice No. 2016-19 9 – Standards for Classification and/or Labeling of Chemicals and for Materials Safety Data Sheets: This safety data sheet is prepared in accordance with the requirements of South Korea,
- Korean Existing Chemical Substances List: Sodium Chloride, Calcium Chloride, and Tris HCl are listed. This product is used for laboratory research and development purposes.
- Korea Priority Existing Chemicals List (PEC): No component is listed.
- List of Toxic Chemical Substances: No component is listed.

15.16 TAIWAN: PERTINENT REGULATIONS

- Regulations of Labelling and Communication of Hazardous Chemicals (Directive of the Executive Yuan Council of Labor Affairs, Labor Affairs No. 10302007861: This safety data sheet is prepared in accordance with the requirements of Taiwan.
- Chemical Substance Inventory in Taiwan, China (TCSI): Sodium Chloride, Calcium Chloride, and Tris HCl are listed. This product is used for laboratory research and development purposes.

15.17 THAILAND: PERTINENT REGULATIONS

- Hazard Classification and Communication System of Hazardous Substances B.E.2555 (2012): This safety data sheet has been prepared in accordance with Thai requirements.
- Thailand Existing Chemicals Inventory (TECI): Sodium Chloride and Calcium Chloride are listed.

15.18 TURKEY: PERTINENT REGULATIONS

- Annex 2 Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması" (KKDIK/Registration, Evaluation, Authorization and Restriction of Chemicals): This safety data sheet has been prepared in accordance with the requirements of Turkey.
- Chemical Inventory of Turkey per KKDIK: Sodium Chloride, Calcium Chloride, and Tris HCl are listed.

15.19 CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE

- **DATE OF PREPARATION:** November 25, 2024
- **SUPERCEDES:** Not applicable.
- **CHANGE INDICATED:** New product.

16.2 HAZARDOUS MATERIALS SYSTEM RATING

Health	0	
Flammability	0	<i>(Personal Protective Equipment Rating: Occupational Use situations: Refer to section 8 for guidance on the selection of personal production.</i>
Physical Hazard	0	
Protective Equipment	*	

16.2 DEFINITIONS

SECTION	EXPLANATION OF TERMS/ABBREVIATIONS
ALL	<u>EU</u> : European Union. <u>CLP</u> : Union Classification, Labelling, and Packaging of Substances and Mixtures
3	<u>CAS Number</u> : Chemical Abstract Service Number, used by the American Chemical Society to uniquely identify a chemical.
5	<u>NFPA</u> : National Fire Protection Association. <u>NFPA FLAMMABILITY CLASSIFICATION</u> : The NFPA uses the flash point (F.I.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.I.P. below 73°F and BP below 100°F. Class IB: F.I.P. below 73°F and BP at or above 100°F. Class IC: F.I.P. at or above 73°F and BP at or above 100°F. Class II: F.I.P. at or above 100°F and below 140°F. Class IIIA: F.I.P. at or above 140°F and below 200°F. Class IIIB: F.I.P. at or above 200°F. <u>NFPA HAZARDOUS MATERIALS RATING</u> : This is a rating system used to summarize physical and health hazards to firefighters Blue = Health hazard; Red = Fire Hazard; Yellow = Reactivity Hazard. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.
8	<u>OEL</u> : Occupational Exposure Limit. <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter.
8	<u>ACGIH</u> : American Conference of Government Industrial Hygienists; <u>TWA</u> : Time-Weighted Average (over an 8-hour workday); <u>STEL</u> : Short-Term Exposure Limit (15-minute average, no more than 4 times daily and each exposure separated by one hour minimally); <u>C</u> : Ceiling Limit (concentration not to be exceeded in a work environment). <u>PEL</u> : Permissible Exposure Limit. <u>NIOSH</u> : National Institute of Occupational Safety and Health; <u>REL</u> : Recommended Exposure Limit; <u>IDLH</u> : Immediately Dangerous to Life and Health <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter. <u>BEI</u> : Biological Exposure Limit. <u>MAK</u> : Maximum Concentration Values in the Workplace; <u>AIHA WEEL</u> : AIHA WEEL – American Industrial Hygiene Association Workplace Environment Exposure Levels; <u>OEL</u> : Occupational Exposure Limit.
9	<u>pH</u> : Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, a pH value of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. <u>FLASH POINT</u> : Temperature at which a liquid generates enough flammable vapors so that ignition may occur. <u>AUTOIGNITION TEMPERATURE</u> : Temperature at which spontaneous ignition occurs. <u>LOWER EXPLOSIVE LIMIT (LEL)</u> : The minimal concentration of flammable vapors in air which will sustain ignition. <u>UPPER EXPLOSIVE LIMIT (UEL)</u> : The maximum concentration of flammable vapors in air which will sustain ignition.
11	<u>CARCINOGENICITY STATUS</u> : <u>NTP</u> : National Toxicology Program. <u>IARC</u> : International Agency for Research on Cancer. <u>TOXICOLOGY DATA</u> : <u>LD_{xx}</u> or <u>LC_{xx}</u> : The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designated route of administration. This value is used to assess the toxicity of chemical substances to humans. <u>TD_{xx}</u> or <u>TC_{xx}</u> : The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designated route of administration.
12	<u>EC50</u> : Effect Concentration. <u>PBT or vPvB</u> : Persistent/ Bioaccumulative /Toxic; Very Persistent/ Very Bioaccumulative
13	<u>RCRA</u> : Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. <u>EPA RCRA Waste Codes</u> : Defined in 40 CFR Section 261.
15	<u>CERCLA</u> : Comprehensive Environmental Response, Compensation, and Liability Act. <u>SARA</u> : Superfund Amendments and Reauthorization Act. <u>TSCA</u> : Toxic Substances Control Act. <u>DSL/NDL</u> : Domestic Substances List/Non-Domestic Substances List. <u>REACH</u> : European Union regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals.
16	<u>HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING</u> : This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier:**
 - **Trade name:** Lys C Buffer
 - **Product number:** 806-00010-00
 - **REACH Registration number:** Not relevant
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.
- **Application of the substance / the mixture:** Kit Component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Quantum-Si, Inc.
29 Business Park Drive
Branford, CT 06405
+1 860-577-0668
www.quantum-si.com/
- **1.4 Emergency telephone number:**
Chemtrec (US and Canada): (800) 424-9300
Chemtrec (Outside US): +1 (703) 527-3887 (Collect calls accepted)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
 - **Hazard pictograms:** Non-Regulated Material
 - **Signal word:** Non-Regulated Material
 - **Hazard statements:** Non-Regulated Material
 - **Additional information:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
0 % of the mixture consists of component(s) of unknown toxicity.
Contains 0 % of components with unknown hazards to the aquatic environment.
- **2.3 Other hazards:** None known
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
 - **Description:** Mixture: consisting of non-regulated material.
 - **Dangerous components:** Non-Regulated Material
 - **Additional information:** For the wording of the listed hazard phrases refer to section 16.

(Contd. on page 2)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 1)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** If symptoms persist, call a physician.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
If skin irritation occurs, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
If eye irritation occurs, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

* SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **5.2 Special hazards arising from the substance or mixture:** No further relevant information available.
- **5.3 Advice for firefighters**
Move containers from fire area if possible to do so without risk. Use water spray to cool fire-exposed containers.
- **Protective equipment:**
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** Not required.
- **6.2 Environmental precautions:** Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire and explosion protection:** No special measures required.

(Contd. on page 3)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 2)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Hand protection** Not required.
- **Material of gloves:** Not applicable.
- **Penetration time of glove material:** Not applicable.
- **Eye/face protection**



Goggles recommended during refilling

- **Environmental exposure controls** None

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Clear
- **Odour:** Odourless
- **Melting point/freezing point:** Not determined.
- **Boiling point or initial boiling point and boiling range** ≥100 °C (7732-18-5 Water, distilled water, deionized water)
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.

(Contd. on page 4)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 3)

· Upper:	Not determined.
· Flash point:	Not applicable.
· Auto-ignition temperature:	Not applicable
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure @ 20 °C:	≤23 hPa (7732-18-5 Water, distilled water, deionized water)
· Density and/or relative density	
· Density:	Not determined.
· Relative density:	Not determined.
· Vapour density:	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not self-igniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· VOC (EC)	0.0 g/l 0.00 %
· Change in condition	
· Evaporation rate:	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Non-Regulated Material
· Flammable gases	Non-Regulated Material
· Aerosols	Non-Regulated Material
· Oxidising gases	Non-Regulated Material
· Gases under pressure	Non-Regulated Material
· Flammable liquids	Non-Regulated Material
· Flammable solids	Non-Regulated Material
· Self-reactive substances and mixtures	Non-Regulated Material
· Pyrophoric liquids	Non-Regulated Material
· Pyrophoric solids	Non-Regulated Material
· Self-heating substances and mixtures	Non-Regulated Material
· Substances and mixtures, which emit flammable gases in contact with water	Non-Regulated Material
· Oxidising liquids	Non-Regulated Material
· Oxidising solids	Non-Regulated Material

(Contd. on page 5)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 4)

- | | |
|----------------------------------|------------------------|
| · Organic peroxides | Non-Regulated Material |
| · Corrosive to metals | Non-Regulated Material |
| · Desensitised explosives | Non-Regulated Material |

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** No data available.
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT (Specific target organ toxicity)-single exposure**
Based on available data, the classification criteria are not met.
- **STOT (Specific target organ toxicity)-repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** No further relevant information available.
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.

(Contd. on page 6)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 5)

- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR/ADN, IMDG, IATA** Non-Regulated Material
- **14.2 UN proper shipping name**
- **ADR/ADN, IMDG, IATA** Non-Regulated Material
- **14.3 Transport hazard class(es)**
- **ADR/ADN, ADN, IMDG, IATA**
- **Class** Non-Regulated Material
- **14.4 Packing group**
- **ADR/ADN, IMDG, IATA** Non-Regulated Material
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Not applicable.
- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

· **Regulated explosives precursors**

None of the ingredients are listed.

· **Regulated poisons**

None of the ingredients are listed.

· **Reportable explosives precursors**

None of the ingredients are listed.

· **Reportable poisons**

None of the ingredients are listed.

- **Directive 2012/18/EU** Substance is not listed.

(Contd. on page 7)

Safety data sheet

REACH: Regulation (EC) No 2020/878 (in particular as amended by Regulation (EU) No. 1907/2006 & 2015/830 with respect to SDSs) & CLP: Regulation (EC) No 1272/2008

Printing date 17.01.2024

Version number 2 (replaces version 1)

Revision: 17.01.2024

Trade name: Lys C Buffer

(Contd. of page 6)

· **Named dangerous substances - ANNEX I** None of the ingredients are listed.

· **National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· *** Data compared to the previous version altered.**

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106

SAFETY DATA SHEET

This document is in compliance with requirements for Safety Data Sheets implemented under U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2024 and equivalent State Standards), guidelines from the United Nations Globally Harmonized System of Classification of Chemicals (GHS). See section 16 for more information on national regulations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

- **PRODUCT NAME:** LYS C
- **PRODUCT CODE:** 806-00022-00

1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Kit component for protein sequencing process.
- **USES ADVISED AGAINST:** Procedures not related to the intended use of this product.
- **IDENTIFIED USERS:** For sale to, use, and storage by personnel trained in handling product safely.

1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER:** Quantum SI, Inc.
- **ADDRESS:** 29 Business Park Dr., Suite C; Branford, CT; 06405
- **BUSINESS PHONE:** 866-688-7374 (8:00 am to 5:00 pm, Eastern Standard Time)
- **EMERGENCY PHONE:** +1- Chemtrec (US and Canada): +1-800-424-9300
Outside US): +1-703- 527-3887
- **Email:** support@quantum-si.com

SECTION 2: HAZARD IDENTIFICATION

2.1 HAZARD CLASSIFICATION (US OSHA, CANADIAN WHMIS, and EU CLP)

- Not classified as hazardous under pertinent national standards.

2.2 LABEL ELEMENTS (US OSHA, CANADIAN WHMIS, and EU CLP)

- **Hazard Pictograms:** Not applicable.
- **Signal Word:** Not applicable.
- **Hazard Statements:** Not applicable.
- **Precautionary Statements:** Not applicable.

2.3 OTHER PERTINENT DATA ON HEALTH, PHYSICAL, AND ENVIRONMENTAL HAZARDS

- Not applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 IDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

NAME	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w) ¹
Lysyl endopeptidase	78642-25-8	Non-hazardous enzyme.	=<100%
N/A	N/A	N/A	N/A

¹ The exact composition is a trade secret. All required hazard and safety information has been provided for the products, per the regulations.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

• BASIC FIRST AID BY EXPOSURE ROUTE:

AREA EXPOSED

TREATMENT

Eye Contact:

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

Skin Contact:

Wash skin with soap and water.

Inhalation:

Remove to fresh air.

Ingestion:

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- No information available.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

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

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- No information available

5.3 UNUSUAL HAZARDS IN FIRE SITUATIONS

POTENTIAL HAZARD

DESCRIPTION FOR PRODUCT

Explosion Sensitivity to Mechanical Impact:

Not applicable.

Explosion Sensitivity to Static Discharge:

Not applicable.

5.4 ADVICE FOR FIREFIGHTERS

- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- Ensure adequate ventilation, especially in confined areas.

6.2 ENVIRONMENTAL PRECAUTIONS

- To be careful not discharged to the environment without being properly handled waste water contaminated.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

- Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

- **TECHNICAL MEASURES:** Avoid contact with strong oxidizing agents.
- **PROTECTIVE PRACTICES:** Handle in accordance with good industrial hygiene and safety practice.

SECTION 7: HANDLING AND STORAGE (Continue)

7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** Container protected from light, and store tightly closed in freezer (-20°C).
- **PACKAGING MATERIALS:** Glass
- **INCOMPATIBILITIES:** Strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **CONTROL PARAMETERS:** None established.

8.2 EXPOSURE CONTROLS

- **GENERAL GUIDELINES:** This product is intended for use by trained personnel as part of a kit.
- **ENGINEERING CONTROLS:** In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand and eye-wash facility. And display their position clearly.
- **RESPIRATORY PROTECTION:** Dust mask.
- **HAND PROTECTION:** Protection gloves
- **EYE PROTECTION:** Protective eyeglasses or chemical safety goggles
- **BODY PROTECTION:** Body protection suitable to task is recommended (e.g., laboratory coat).
- **OTHER PROTECTIVE MEASURES:** Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

<u>PROPERTY</u>	<u>DATA</u>
State:	Solid
Color:	Not determined
Odor:	Not determined
Odor Threshold:	Not determined
pH:	7.5 - 8.5

- **PHYSICAL DATA:**

<u>PROPERTY</u>	<u>DATA</u>
Melting Point/Freezing Point:	Not determined
Initial Boiling Point/Boiling Range:	Not determined
Flash Point:	Not determined
Evaporation Rate (Water = 1):	Not determined
Flammability:	Not determined
Upper/Lower Explosion Limits	Not determined
Vapor Pressure:	Not determined
Vapor Density	Not determined
Relative Density at 20 °C (68 °F)	Not determined
Solubility:	Totally soluble in water
Partition Coefficient/n-octanol/water:	Not determined
Autoignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Kinematic Viscosity:	Not determined
Particle Characteristics:	Not determined

9.2 INFORMATION RELEVANT TO PHYSICAL HAZARD CLASSIFICATION

- **Information regarding Physical Hazard Classes** This product is not classified under any physical hazard class.
- **Other Safety Characteristics** Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY AND CHEMICAL STABILITY

- May be altered by light.

10.2 POSSIBILITY OF HAZARDOUS REACTIONS (INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCY)

- No data available.

10.3 CONDITIONS TO AVOID

- Extremes of temperature and direct sunlight

10.4 INCOMPATIBLE MATERIALS

- Strong oxidizing agents.

10.5 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition include carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON ACUTE TOXICITY

- **PRODUCT TOXICOLOGY DATA:** No data available.
- **COMPONENT TOXICOLOGY DATA:** No data available.
- **DEGREE OF IRRITATION:** No data available.
- **SENSITIZATION:** No data available.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** No data available.
- **CARCINOGENICITY STATUS:** : No data available
- **REPRODUCTIVE TOXICITY INFORMATION:** Not applicable.
- **MUTAGENIC EFFECTS** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

11.3 OTHER USEFUL TOXICOLOGY INFORMATION

- **ENDOCRINE-DISRUPTING PROPERTIES:** Not applicable.
- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL TOXICITY : No information available.

12.2 PERSISTENCE AND DEGRADABILITY: No information available.

12.3 BIOACCUMULATIVE POTENTIAL: No information available.

12.4 MOBILITY IN SOIL: No information available.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT : No information available.

12.6 ENDOCRINE DISRUPTING PROPERTIES: No information available.

12.7 OTHER ADVERSE ENVIRONMENTAL EFFECTS: No information available.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, state, and national regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS

- **IATA DESIGNATION:** Product is not regulated as a dangerous good by the International Air Transport Association.
- **IMO DESIGNATION:** Product is not applicable by the International Maritime Organization.
- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION						

- **CANADIAN TRANSPORTATION INFORMATION:** This product is not regulated by Transport Canada as dangerous
- **EUROPEAN TRANSPORT CLASSIFICATION BY ROAD (ADR)/RAIL (RID):** Product is not regulated as a dangerous good.

14.2 ENVIRONMENTAL HAZARDS

- Not applicable.

14.3 SPECIAL PRECAUTIONS FOR TRANSPORTERS

- None established.

14.4 TRANSPORT IN BULK

- **ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:** Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 U.S. FEDERAL REGULATIONS

- **U.S. CERCLA:** This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.
- **CWA (Clean Water Act):** This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)
- **U.S. SARA TITLE 313:** Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372
- **U.S. SARA 311/312:** Not applicable.

15.2 U.S. STATE REGULATIONS FOR COMPONENTS

- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** This product does not contain any chemicals regulated by Proposition 65.
- **EPA Pesticide Registration Number:** Not applicable

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE

- **DATE OF PREPARATION:** November 27, 2024
- **SUPERCEDES:** Not applicable.
- **CHANGE INDICATED:** New product.

SAFETY DATA SHEET

This document is in compliance with requirements for Safety Data Sheets implemented under U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2024 and equivalent State Standards), guidelines from the United Nations Globally Harmonized System of Classification of Chemicals (GHS), the Canadian Workplace Hazardous Materials Information System (WHMIS) and Hazardous Products Regulations (HPR), and the European Union regulation on the Classification, Labelling and Packaging of Substances and Mixtures (EC No. 1272/2008, EU 2020/878) and the standard of other nations. See section 16 for more information on national regulations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

- **PRODUCT NAME:** POLYG LINKER
- **PRODUCT CODE:** 806-00077-00

1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Kit component for protein sequencing process.
- **USES ADVISED AGAINST:** Procedures not related to the intended use of this product.
- **IDENTIFIED USERS:** For sale to, use, and storage by personnel trained in handling product safely.

1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER:** Quantum SI, Inc.
- **ADDRESS:** 29 Business Park Dr., Suite C; Branford, CT; 06405
- **BUSINESS PHONE:** 866-688-7374 (8:00 am to 5:00 pm, Eastern Standard Time)
- **EMERGENCY PHONE:** +1- Chemtrec (US and Canada): +1-800-424-9300
Outside US): +1-703- 527-3887
- **Email:** support@quantum-si.com

SECTION 2: HAZARD IDENTIFICATION

2.1 HAZARD CLASSIFICATION (US OSHA, CANADIAN WHMIS, and EU CLP)

- Not classified as hazardous under pertinent national standards.

2.2 LABEL ELEMENTS (US OSHA, CANADIAN WHMIS, and EU CLP)

- **Hazard Pictograms:** Not applicable.
- **Signal Word:** Not applicable.
- **Hazard Statements:** Not applicable.
- **Precautionary Statements:** Not applicable.

2.3 OTHER PERTINENT DATA ON HEALTH, PHYSICAL, AND ENVIRONMENTAL HAZARDS

- Not applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 IDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

NAME	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w) ¹
Sodium Chloride	7647-14-5	Not hazardous.	10-30%
Tris HCl: Tris(hydroxymethyl)aminomethane hydrochloride	1185-53-1	Not hazardous.	10-30%

¹ The exact composition is a trade secret. All required hazard and safety information has been provided for the products, per the regulations.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

- BASIC FIRST AID BY EXPOSURE ROUTE:**

<u>AREA EXPOSED</u>	<u>TREATMENT</u>
---------------------	------------------

Eye Contact:	Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention should any irritation develop.
---------------------	---

Skin Contact:	Flush area with warm, running water for several minutes. Seek medical attention should any irritation develop.
----------------------	--

Inhalation:	Obtain fresh air. Seek medical attention if irritation develops after exposure ends.
--------------------	--

Ingestion:	If conscious only: Rinse mouth with water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.
-------------------	---

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- ACUTE HEALTH EFFECTS:**

<u>AREA EXPOSED</u>	<u>EFFECTS</u>
---------------------	----------------

Eye Contact:	May cause eye irritation upon prolonged exposure.
---------------------	---

Skin Contact:	May cause skin irritation upon prolonged exposure.
----------------------	--

Inhalation:	Not anticipated to be a potential route of exposure.
--------------------	--

Ingestion:	Not anticipated to be a potential route of exposure.
-------------------	--

- CHRONIC HEALTH EFFECTS:** None known.

- TARGET ORGANS:** None known.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.

- RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.

- MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None known.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

- RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Dry Powder, Foam, Carbon Dioxide, or any other type.

- UNSUITABLE FIRE EXTINGUISHING MEDIA:** None.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- NFPA FLAMMABILITY CLASSIFICATION:**

NFPA Rating:



NFPA Hazard Classification: Not classified.

5.3 UNUSUAL HAZARDS IN FIRE SITUATIONS

<u>POTENTIAL HAZARD</u>	<u>DESCRIPTION FOR PRODUCT</u>
-------------------------	--------------------------------

Decomposition:	Generates irritating vapors, carbon monoxide, carbon dioxide, and compounds of sodium, nitrogen, and chlorine. See Section 10 (Reactivity and Stability).
-----------------------	---

Incompatibilities:	Not applicable.
---------------------------	-----------------

Explosion Sensitivity to Mechanical Impact:	Not applicable.
--	-----------------

Explosion Sensitivity to Static Discharge:	Not applicable.
---	-----------------

SECTION 5: FIREFIGHTING MEASURES (Continue)

5.4 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material. Subsequently, personnel can follow the instructions for incidental releases.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Use damp sponge or polypad to carefully cleanse contaminated area or items. If appropriate, further clean contaminated area and equipment with soap and water solution, followed by a water rinse.

6.2 ENVIRONMENTAL PRECAUTIONS

- **IN CASE OF SPILL:** Collect spillage promptly. Avoid response actions that can cause a release of a significant amount of substance into the environment. Avoid accidental dispersal of spilled material into soil, waterways, and sewers.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or sponge. Appropriate waste container.

6.4 REFERENCE TO OTHER SECTIONS

- See Section 8 (Exposure Controls/Personal Protection) for personal protective equipment recommendations.
- See Section 13 (Disposal Recommendations) for information on waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

- **HYGIENE PRACTICES:** Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists, sprays, or aerosols. Use in a well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
- **HANDLING PRACTICES:** Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** Ensure all containers are correctly labeled. Store containers away from direct sunlight and sources of intense heat. Store this product away from incompatible chemicals. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual material; therefore, empty containers should be handled with care.
- **INCOMPATIBILITIES:** See Section 10 (Stability and Reactivity).

7.3 SPECIFIC END USES

- This product is for use in protein sequencing processes by trained laboratory personnel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**
 - **U.S:** No airborne occupational exposure limits have been established.
 - **Canada:** No airborne occupational exposure limits have been established.
 - **EU:** No airborne occupational exposure limits have been established.
- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** None established.
- **DERIVED NO EFFECTS LEVEL:** The following levels have been established for the components of this product:
 - **SODIUM CHLORIDE:** Inhalation exposure: Chronic systemic effects: 2.069 mg/m³; Acute systemic effects: 2.069 mg/m³. Dermal exposure: Chronic systemic effects: 295.5 mg/kg body weight/day; Acute systemic effects: 295.5 mg/kg body weight/day.
 - **TRIS HCL:** Inhalation exposure: Chronic systemic effects: 162 mg/m³; Dermal exposure: Chronic systemic effects: 216 mg/kg body weight/day
- **PREDICTED NO EFFECT CONCENTRATION:** The following data is available for the components of this product:
 - **SODIUM CHLORIDE:** Freshwater: PNEC = 5 mg/L; Sewage treatment plant (STP): PNEC = 500 mg/L; Soil: PNEC = 4.86 mg/kg soil dry weight
 - **TRIS HCL:** Sewage treatment plant (STP): PNEC = 300 mg/L;

8.2 EXPOSURE CONTROLS

- **GENERAL GUIDELINES:** This product is intended for use by trained personnel as part of a kit.
- **ENGINEERING CONTROLS:** Ensure the area has adequate ventilation to ensure minimal inhalation of mists or sprays occurs. Eye wash stations and safety showers should be readily available.
- **RESPIRATORY PROTECTION:** None needed under normal circumstances of use.
- **HAND PROTECTION:** None typically needed for anticipated use. Neoprene or nitrile gloves are recommended if skin contact can occur (e.g., spill clean-up). Ensure gloves are intact prior to use.
- **EYE PROTECTION:** Safety glasses are recommended if splash or spray can occur during use (e.g., during refilling of unit).
- **BODY PROTECTION:** Body protection suitable to task is recommended (e.g., laboratory coat).
- **OTHER PROTECTIVE MEASURES:** Wash hands during breaks and at the end of handling the material. Immediately remove any contaminated clothing.

8.3 ENVIRONMENTAL EXPOSURE CONTROLS

- Minimize the generation of mists, sprays, or aerosols while using this product. Avoid release into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

<u>PROPERTY</u>	<u>DATA</u>
State:	Liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	Not determined
pH:	7.5

- **PHYSICAL DATA:**

<u>PROPERTY</u>	<u>DATA</u>
Melting Point/Freezing Point:	Not determined.
Initial Boiling Point/Boiling Range:	Not determined.
Flash Point:	Not applicable.
Evaporation Rate (Water = 1):	Approximately 1.0
Flammability:	Not applicable.
Upper/Lower Explosion Limits	Not applicable.
Vapor Pressure:	Not determined.
Vapor Density	Not determined.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (Continue)

Relative Density at 20 °C (68 °F)	Not determined.
Solubility:	Totally soluble in water
Partition Coefficient/n-octanol/water:	Not determined
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not determined.
Kinematic Viscosity:	Not determined.
Particle Characteristics:	Not applicable.

9.2 INFORMATION RELEVANT TO PHYSICAL HAZARD CLASSIFICATION

- **Information regarding Physical Hazard Classes** This product is not classified under any physical hazard class.
- **Other Safety Characteristics** Not applicable
- **VOC content: 0.00%; 0.0 g/L**

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY AND CHEMICAL STABILITY

- The product is not reactive under typical conditions of use or handling.
- Normally stable under standard temperatures and pressures.

10.2 POSSIBILITY OF HAZARDOUS REACTIONS (INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCY)

- Product is not self-reactive, water-reactive, or air-reactive; it will not undergo hazardous polymerization.

10.3 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals and adverse storage conditions.

10.4 INCOMPATIBLE MATERIALS

- Strong oxidizing agents.

10.5 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition include carbon oxides, carbon monoxide, carbon dioxide, and compounds of sodium, nitrogen, and chlorine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON ACUTE TOXICITY

- **PRODUCT TOXICOLOGY DATA:** The following are calculated estimates for the product:
 - Acute Toxicity Estimate (Oral) > 5000 mg/kg
 - Acute Toxicity Estimate (Dermal) > 5000 mg/kg
 - Acute Toxicity Estimate (Inhalation) > 5 mg/L (dusts and mists)
- **COMPONENT TOXICOLOGY DATA:** The following data are available for components of this product:

<u>SODIUM CHLORIDE</u>	<u>TRIS HCL</u>
LD 50 (oral, rat) = 3000 mg/kg	LD 50 (oral, rat) > 5000 mg/kg
LC50 (dermal, rabbit) > 10000 mL/kg	LC50 (dermal, rabbit) > 5000 mL/kg
L50 (Inhalation, rat) > 42 mg/L	
- **DEGREE OF IRRITATION:** This product is not anticipated to cause skin or eye irritation.
- **SENSITIZATION:** This product does not contain any compound reported to as a skin or respiratory sensitizer.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazard Information) and Section 4 (First-Aid Measures) for additional details.
 - **Eyes:** May cause eye irritation upon prolonged exposure.
 - **Skin:** May cause skin irritation upon prolonged exposure.
 - **Inhalation:** Not anticipated to be a significant route of occupational exposure.
 - **Ingestion:** Not anticipated to be a significant route of occupational exposure.

SECTION 11: TOXICOLOGICAL INFORMATION (Continue)

11.2 INFORMATION ON CHRONIC TOXICITY

- **CARCINOGENICITY STATUS:** This product is not listed as a carcinogen by NTP, IARC, or OSHA.
- **REPRODUCTIVE TOXICITY INFORMATION:** Not applicable.
- **MUTAGENIC EFFECTS** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

11.3 OTHER USEFUL TOXICOLOGY INFORMATION

- **ENDOCRINE-DISRUPTING PROPERTIES:** Not applicable.
- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL TOXICITY

- The following aquatic toxicity data are available for the components of this product.

SODIUM CHLORIDE

LC50: 7650 mg/l, Pimephales promelas, 96 hours
EC50:> 1000 mg/L, Daphnia magna, 48 hours

TRIS HCL

EC50 > 10000 mg/L, Microtoxicity
EC50:> 1000 mg/L, Daphnia magna, 48 hours

12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.
- The following data are available for the components of this product:

TRIS HCL

Log Know = -3.6

Not anticipated to bioaccumulate significantly.

12.4 MOBILITY IN SOIL

- Based on its total solubility in water, this product is expected to have significant mobility in soil.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

- Not classified as PBT or vPvB.

12.6 ENDOCRINE DISRUPTING PROPERTIES

- None reported.

12.7 OTHER ADVERSE ENVIRONMENTAL EFFECTS

- None reported.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, state, and national regulations.

13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** Not applicable to wastes consisting only of this product.
- **SEWAGE DISPOSAL:** Waste should not be disposed of by release to sewers.

13.3 DISPOSITION OF EMPTY CONTAINERS

- Empty containers may contain residual material; therefore, empty containers should be handled with care.
- Empty containers should be discarded properly.

SECTION 14: TRANSPORT INFORMATION

14.1 HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION						

- **CANADIAN TRANSPORTATION INFORMATION:** This product is not regulated by Transport Canada as dangerous good.
- **EUROPEAN TRANSPORT CLASSIFICATION BY ROAD (ADR)/RAIL (RID):** Product is not regulated as a dangerous good.
- **IATA DESIGNATION:** Product is not regulated as a dangerous good by the International Air Transport Association.
- **IMO DESIGNATION:** Product is not regulated as a dangerous good by the International Maritime Organization.

14.2 ENVIRONMENTAL HAZARDS

- None known.

14.3 SPECIAL PRECAUTIONS FOR TRANSPORTERS

- None established.

14.4 TRANSPORT IN BULK

- **ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:** Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 OTHER IMPORTANT U.S. SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **US TOXICITY SUBSTANCES CONTROL INVENTORY:** The components of this product are listed.
- **U.S. SARA THRESHOLD PLANNING QUANTITY:** Not applicable.
- **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** Not applicable.
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable to the product, based on composition and volume.
- **U.S. SARA TITLE 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313
- **US CLEAN AIR ACT (SECTION 112r):** Not applicable.

15.2 OTHER IMPORTANT U.S. STATE REGULATIONS FOR COMPONENTS

- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **NEW JERSEY RIGHT TO KNOW LIST HAZARDOUS SUBSTANCES LIST:** No product ingredient is listed.
- **NEW JERSEY ENVIRONMENTAL SUBSTANCES LIST:** No product ingredient is listed.
- **PENNSYLVANIA RIGHT-TO-KNOW LIST:** No product ingredient is listed.

15.3 CANADIAN AND EU SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **ADDITIONAL WHMIS INFORMATION:** This SDS contains all the required elements under the Canadian Hazardous Products Regulations (SOR 2022-272).
- **CANADIAN DSL/NDL INVENTORY STATUS:** All components of this product are listed or exempted.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priority Substances Lists.
- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.4 EUROPEAN UNION SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

- **E.U. REACH:** Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances. REACH (1907/2006). Contains no substance with REACH Restrictions.

15.5 EUROPEAN UNION CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been conducted.

15.6 ARGENTINA: PERTINENT REGULATIONS

- **STANDARD IRAM 41400-AR (Chemical Products - Safety Data Sheet):** This safety data sheet is prepared in accordance with the requirements of Argentina.
- **Carcinogenic Substances and Agents Registry.** Not applicable.
- **Control of Precursors and Essential Chemicals for the Preparation of Drugs:** Not applicable.

15.7 AUSTRALIA: PERTINENT REGULATIONS

- **National Code of Practice for the Preparation of Safety Data Sheets [NOHSC:2011(2003)]:** This safety data sheet is prepared in accordance with the requirements of Australia.
- **Australian Inventory of Industrial Chemicals (AIIC):** Sodium Chloride and Tris HCl are listed.

15.8 BRAZIL: PERTINENT REGULATIONS

- **ABNT NBR 14725:2023 – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals:** This safety data sheet is prepared in accordance with the requirements of Brazil.
- **National List of Carcinogenic Agents for Humans - (LINACH):** Not applicable.
- **List of Chemicals Controlled by the Federal Police:** Not applicable.

15.9 CHILE: PERTINENT REGULATIONS

- **NCh 2245:2021 (Chemical Product Safety Data Sheet – Order and Content of Sections):** This safety data sheet is prepared in accordance with the requirements of Chile.
- **Chilean Chemical Inventory established under Decree 57/2019 – Sodium Chloride is currently listed.**

15.10 INDIA: PERTINENT REGULATIONS

- **Schedule 9 – The Manufacture, Storage, and Import of Hazardous Chemicals Rule, 1989:** This safety data contains all information required under the regulations in India.
- **List of Hazardous and Toxic Chemicals –** Not applicable.

15.11 ISRAEL: PERTINENT REGULATIONS

- Israel Standard 2302-1 (2004) – Classification, Packaging, Labeling, and Marking of Dangerous Materials: This safety data contains all information required under the regulations in Israel.

15.12 MEXICO: PERTINENT REGULATIONS

- NOM-018-STPS-2015] – Official Order Establishing the Globally Harmonized System of the Classification and Labelling of Chemicals: This safety data sheet is prepared in accordance with the requirements of Mexico.
- Mexican Inventory of Chemical Substances: Sodium Chloride is listed.

15.13 QATAR AND UNITED ARAB EMIRATES: PERTINENT REGULATIONS

- Gulf Standardization Organization Technical Order 2654:2021 9 – The Global Harmonized System (GHS) in Gulf Cooperation Council (GCC) countries: This safety data sheet is prepared in accordance with the requirements of the Gulf States.

15.14 SINGAPORE: PERTINENT REGULATIONS

- Singapore Standard SS 586-3:2022 9 – Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods: This safety data sheet is prepared in accordance with the requirements of Singapore.
- Controlled Hazardous Substances List maintained by National Environment Agency: No product component is listed.
- Singapore Ozone-Depleting Substances List: No product component is listed.

15.15 SOUTH KOREA: PERTINENT REGULATIONS

- Public Notice No. 2016-19 9 – Standards for Classification and/or Labeling of Chemicals and for Materials Safety Data Sheets: This safety data sheet is prepared in accordance with the requirements of South Korea,
- Korean Existing Chemical Substances List: Sodium Chloride and Tris HCl are listed. This product is used for laboratory research and development purposes.
- Korea Priority Existing Chemicals List (PEC): No component is listed.
- List of Toxic Chemical Substances: No component is listed.

15.16 TAIWAN: PERTINENT REGULATIONS

- Regulations of Labelling and Communication of Hazardous Chemicals (Directive of the Executive Yuan Council of Labor Affairs, Labor Affairs No. 10302007861: This safety data sheet is prepared in accordance with the requirements of Taiwan.
- Chemical Substance Inventory in Taiwan, China (TCSI): Sodium Chloride and Tris HCl are listed. This product is used for laboratory research and development purposes.

15.17 THAILAND: PERTINENT REGULATIONS

- Hazard Classification and Communication System of Hazardous Substances B.E.2555 (2012): This safety data sheet has been prepared in accordance with Thai requirements.
- Thailand Existing Chemicals Inventory (TECI): Sodium Chloride is listed.

15.18 TURKEY: PERTINENT REGULATIONS

- Annex 2 Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması" (KKDIK/Registration, Evaluation, Authorization and Restriction of Chemicals): This safety data sheet has been prepared in accordance with the requirements of Turkey. Chemical Inventory of Turkey per KKDIK: Sodium Chloride and Tris HCl are listed.

15.19 CHEMICAL SAFETY ASSESSMENT

- **ASSESSMENT INFORMATION:** No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE

- **DATE OF PREPARATION:** November 25, 2024
- **SUPERCEDES:** Not applicable.
- **CHANGE INDICATED:** New product.

16.2 HAZARDOUS MATERIALS SYSTEM RATING

Health	0	
Flammability	0	<i>(Personal Protective Equipment Rating: Occupational Use situations: Refer to section 8 for guidance on the selection of personal production.</i>
Physical Hazard	0	
Protective Equipment	*	

SECTION 16: OTHER INFORMATION (Continue)

16.2 DEFINITIONS

SECTION	EXPLANATION OF TERMS/ABBREVIATIONS
ALL	<u>EU</u> : European Union. <u>CLP</u> : Union Classification, Labelling, and Packaging of Substances and Mixtures
ALL	<u>OSHA</u> : U.S. Federal Occupational Safety and Health Administration. <u>WHMIS</u> : Canadian Workplace Hazardous Materials Standard. <u>GHS</u> : Globally Harmonized System of Classification of Chemical Substances. <u>HCS</u> : Hazard Communication Standard (U.S.). <u>HPR</u> : Hazardous Products Regulations (Canada). <u>EU</u> : European Union. <u>CLP</u> : Union Classification, Labelling and Packaging of Substances and Mixtures
3	<u>CAS Number</u> : Chemical Abstract Service Number, used by the American Chemical Society to uniquely identify a chemical.
5	<u>NFPA</u> : National Fire Protection Association. <u>NFPA FLAMMABILITY CLASSIFICATION</u> : The NFPA uses the flash point (F.I.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.I.P. below 73°F and BP below 100°F. Class IB: F.I.P. below 73°F and BP at or above 100°F. Class IC: F.I.P. at or above 73°F and BP at or above 100°F. Class II: F.I.P. at or above 100°F and below 140°F. Class IIIA: F.I.P. at or above 140°F and below 200°F. Class IIIB: F.I.P. at or above 200°F. <u>NFPA HAZARDOUS MATERIALS RATING</u> : This is a rating system used to summarize physical and health hazards to firefighters Blue = Health hazard; Red = Fire Hazard; Yellow = Reactivity Hazard. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.
8	<u>ACGIH</u> : American Conference of Government Industrial Hygienists; <u>TWA</u> : Time-Weighted Average (over an 8-hour workday); <u>STEL</u> : Short-Term Exposure Limit (15-minute average, no more than 4 times daily and each exposure separated by one hour minimally); <u>C</u> : Ceiling Limit (concentration not to be exceeded in a work environment). <u>PEL</u> : Permissible Exposure Limit. <u>NIOSH</u> : National Institute of Occupational Safety and Health; <u>REL</u> : Recommended Exposure Limit; <u>IDLH</u> : Immediately Dangerous to Life and Health <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter. <u>BEI</u> : Biological Exposure Limit. <u>MAK</u> : Maximum Concentration Values in the Workplace; AIHA WEEL: AIHA WEEL – American Industrial Hygiene Association Workplace Environment Exposure Levels; <u>OEL</u> : Occupational Exposure Limit.
8	<u>OEL</u> : Occupational Exposure Limit. <u>ppm</u> : Parts per Million. <u>mg/m³</u> : Milligrams per cubic meter.
9	<u>pH</u> : Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, a pH value of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. <u>FLASH POINT</u> : Temperature at which a liquid generates enough flammable vapors so that ignition may occur. <u>AUTOIGNITION TEMPERATURE</u> : Temperature at which spontaneous ignition occurs. <u>LOWER EXPLOSIVE LIMIT (LEL)</u> : The minimal concentration of flammable vapors in air which will sustain ignition. <u>UPPER EXPLOSIVE LIMIT (UEL)</u> : The maximum concentration of flammable vapors in air which will sustain ignition.
11	<u>CARCINOGENICITY STATUS</u> : NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. <u>TOXICOLOGY DATA</u> : LDxx or LCxx: The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designated route of administration. This value is used to assess the toxicity of chemical substances to humans. TDxx or TCxx: The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designated route of administration.
12	<u>EC50</u> : Effect Concentration. <u>PBT or vPvB</u> : Persistent/ Bioaccumulative /Toxic; Very Persistent/ Very Bioaccumulative
13	<u>RCRA</u> : Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. <u>EPA RCRA Waste Codes</u> : Defined in 40 CFR Section 261.
15	<u>CERCLA</u> : Comprehensive Environmental Response, Compensation, and Liability Act. <u>SARA</u> : Superfund Amendments and Reauthorization Act. <u>TSCA</u> : Toxic Substances Control Act. <u>DSL/NDL</u> : Domestic Substances List/Non-Domestic Substances List. <u>REACH</u> : European Union regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals.
16	<u>HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING</u> : This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.