SEACHEM LABORATORIES, INC. **SAFETY DATA SHEET**

This data sheet was prepared in conformity with the Globally Harmonized System as promulgated by Title 29 of the United States Code of Federal Regulations (CFR) and by European Directives (EC) No. 1272/2008 and 1907/2006/EC. Accordingly, it is only for informational purposes as intended thereby.

Liquid Neutral Regulator

Section 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Liquid Neutral Regulator
OTHER PRODUCT NAMES:	N/A
PRODUCT USE:	Buffer for ornamental aquariums.

SUPPLIER DETAILS

COMPANY NAME:	Seachem Laboratories, Inc.
ADDRESS:	1000 Seachem Drive, Madison, GA 30650 USA
TELEPHONE NUMBER FOR INFORMATION:	706-343-6060
EMERGENCY TELEPHONE NUMBER:	706-343-6060
DATE OF PREPARATION:	May 16, 2011
DATE OF LAST REVISION:	Dec 30, 2015

Section 2: HAZARDS IDENTIFICATION

Hazard Classification:

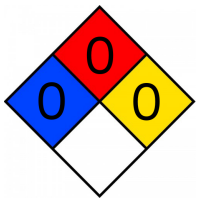
Under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200, and Regulation (EC) No 1272/2008 (GHS):

This material is not hazardous.

Label elements: **No measures required**

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD RATINGS

Health (Blue): 0 – Minimal
Flammability (Red): 0 – Minimal
Instability (Yellow): 0 – Minimal
Other (White): None



HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)
Health Hazard (Blue): 0 – Minimal
Flammability Hazard (Red): 0 – Minimal
Physical Hazard (Orange): 0 – Minimal
Protective Equipment: See section 8



Section 3: COMPOSITION and INFORMATION ON INGREDIENTS

Components	CAS #	EC #	Wt %
*	*	*	*

* Proprietary aqueous solution of phosphate buffers and conditioning agents. The identity and weight of proprietary, non-hazardous, main ingredients are withheld as a trade secret. Other ingredients are present in amounts less than 1% and are non-hazardous.

Section 4: FIRST AID MEASURES

INGESTION: Rinse mouth with water and drink a glass of water. Further first aid not generally required. If unconscious, do not induce vomiting. If in doubt, contact a poison information center or a doctor.

EYE CONTACT: Immediately flush eyes thoroughly with water for 15-20 minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN CONTACT: Wash contaminated area with soap and plenty of and water. Get medical advice if needed.

INHALATION: In case of inhalation of dust, remove victim to fresh air and keep at rest and warm. If victim feels unwell, call a doctor or physician.

RECOMMENDATIONS TO PHYSICIANS: Treat symptomatically. First aid responders should wear suitable protective equipment for eyes, skin, and protective mask depending on the situation

Section 5: FIRE-FIGHTING MEASURES

FIRE EXTINGUISHING MATERIALS: Material is non-flammable.
FLASH POINT: None
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Not Applicable
Lower Explosive Limit (LEL): Not Applicable
Upper Explosive Limit (UEL): Not Applicable

Section 6: ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Wear suitable protective equipment described in section 8. Sweep up scattered materials or vacuum them using a vacuum cleaner so as not to cause dust then collecting into an empty container. Do not eat drink or smoke near release area, handling, or storage location. Take measures to prevent the flow or spread of materials into drains, sewers, basements, or other closed areas.

Section 7: HANDLING AND STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Install or use appropriate equipment and wear suitable protective apparatus described in Section 8. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid generating and breathing dusts or particulates generated by this product. Use in a well-ventilated location. Launder contaminated clothing before reuse.

STORAGE AND HANDLING PRACTICES: Store material in original containers. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks.

Section 8: EXPOSURE CONTROLS-PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use adequate ventilation to ensure exposure levels are maintained below the limits provided below.

EXPOSURE LIMITS/GUIDELINES:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states, and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION:

Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN 529:2005, or EU member states. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. Federal OSHA's Respiratory Protection Standard (1910.134-1998) or the regulations of various U.S. States, Canada, EU Member States, or those of Japan. Air-purifying respirators with dust/mist/fume filters are recommended if operations may involve prolonged exposures to mists or sprays from this product.

EYE PROTECTION:

Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian CSA Standard Z94.3-M1982, *Industrial Eye and Face Protectors*, or relevant European Standards, Australian Standards, or Japanese Standards.

HAND PROTECTION:

Wear neoprene or butyl rubber gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR 1910.138, or relevant European, Canadian, Australian or Japanese Standards.

BODY PROTECTION:

Use body protection appropriate for the task (e.g., apron, lab coat, overalls, etc.) If necessary, refer to appropriate Standards of Canada, the European Union, Australia, or Japan.

Section 9: PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE AND COLOR:	Clear Liquid
ODOR:	None
pH:	6.8 to 7.2
BOILING POINT:	100 °C
FREEZING/MELTING POINT:	0 °C
FLASH POINT:	None
EVAPORATION RATE (n-Butyl Acetate = 1):	0.3
FLAMMABILITY (solid, gas):	Non-flammable
VAPOR PRESSURE @ 20 ^{O}C:	0.023 atm
VAPOR DENSITY (air = 1):	0.62
SPECIFIC GRAVITY (water = 1):	1.0 to 1.1
SOLUBILITY IN WATER:	Soluble

Section 10: STABILITY and REACTIVITY

STABILITY:

This product is stable under normal conditions of use.

REACTIVITY:

This product is non-reactive under normal conditions of use.

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS TO AVOID:

Temperatures above the boiling point or flash point.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:

Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

DECOMPOSITION PRODUCTS:

Decomposition products can include and are not limited to: Carbon dioxide, Alcohols, Ethers, Hydrocarbons, Polymer fragments.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Estimates (ATE) are calculated according to US OSHA Hazard Communication Standard 29CFR 1910.1200. The calculation is based on specific toxicology data for components present in concentrations greater than 1%.

ACUTE TOXICITY

Acute oral toxicity

The calculated **ATE(mix)** for this product is **>50,000.**

Product has negligible toxicity if swallowed.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Typical for this family of materials. LD50, Rabbit > **5,000 mg/kg Estimated**.

Acute inhalation toxicity

No adverse effects are anticipated from inhalation.

SKIN CORROSION/IRRITATION

Essentially nonirritating to skin.

SERIOUS EYE DAMAGE/EYE IRRITATION

May cause eye irritation. Corneal injury is unlikely.

SENSITIZATION

The components of this product are not known to be human skin or respiratory sensitizers.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

CARCINOGENICITY

The components of this product are not listed by U.S. FEDERAL OSHA, NTP, IARC, and CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

TERATOGENICITY

The components of this product are not reported to produce teratogenic effects in humans.

REPRODUCTIVE TOXICITY

The components of this product are not reported to cause reproductive effects in humans.

MUTAGENICITY

The components of this product are not reported to produce mutagenic effects in humans.

ASPIRATION HAZARD

Based on physical properties, not likely to be an aspiration hazard.

Section 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY:

This product will not biodegrade in the environment.

EFFECT OF MATERIAL ON PLANTS OR ANIMALS:

This product is not expected to cause harm to plants or animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE:

No data are currently available on the effects of a release of this product to bodies of water.

Section 13: DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, EU Member States, Australia, and Japan. When disposing, consult to a certificated waste trader or local office if they deal with the waste. The used container should be recycled after cleaning or dispose of in compliance with related laws and local regulations. Contents should be removed completely when disposing of empty containers.

U.S. EPA WASTE NUMBER: Not applicable for wastes of this product.

EUROPEAN UNION EWC CODE: Waste from this product is NOT considered as a hazardous waste pursuant to the relevant EEC Directive on hazardous waste, and is NOT subject to the provisions of that directive.

Section 14: TRANSPORTATION INFORMATION

This product is NOT hazardous as defined by (1) the U.S. Department of Transportation (49 CFR 172.101), (2) per regulations of Transport Canada, (3) per the International Air Transport Association, (4) per rules of the International Maritime Organization, (5) per the Economic Commission for Europe (European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)). Additionally, this product is NOT classified as a Marine Pollutant as defined by 49 CFR 172.101 Appendix B, U.S. Department of Transportation).

When transporting, confirm no leakage from containers. When loading, prevent containers from failing, dropping or damaging. Take preventative measures against collapse.

Section 15: REGULATORY INFORMATION

ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The component of this product is NOT subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: The component of this product has no specific Threshold Planning Quantity. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 pounds (4540 kg) therefore applies, per 40 CFR 370.20.

U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: No; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

U.S. TSCA INVENTORY STATUS: The component of this product is listed on the TSCA Inventory.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable

OTHER U.S. FEDERAL REGULATIONS:

- The component of this product is not subject to the reporting requirements of CFR 29 1910.1000.

- The component of this product is not subject to the reporting requirements of Section 112® of the Clean Air Act.
- The component of this product is not a Class I or Class II ozone depleting chemical (40 CFR part 82).
- The component of this product is not listed under Table 1 as Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Release Prevention.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): The component of this product is not on the California Proposition 65 Lists.

ADDITIONAL CANADIAN REGULATIONS:
CANADIAN DSL/NDSL INVENTORY STATUS: The component of this product is included in the DSL Inventory.
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The component of this product is not on the CEPA Priorities Substances Lists.
CANADIAN WHMIS CLASSIFICATION: This product does not meet the criteria to be classified as a Controlled Product.
CANADIAN WHMIS SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:
EU LABELING/CLASSIFICATION: This product does not meet the definition of hazardous as defined by European Economic Community Guidelines.
EU CLASSIFICATION: Not applicable.
EU RISK PHRASES: R 36 (irritating to eyes); R 37 (irritating to respiratory system)
EU SAFETY PHRASES: S 22 (do not breathe dust); S 25 (avoid contact with eyes)
EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOL: Not applicable
EUROPEAN UNION CLASSIFICATION ON COMPONENTS:
CARBON: A classification by the European Union Directives has not yet been published for this compound.

Section 16: OTHER INFORMATION

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of Seachem Laboratories' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

PREPARED BY: SEACHEM LABORATORIES, INC.
1000 Seachem Drive
Madison, GA 30650
United States of America
706/343-6060

ABBREVIATIONS AND DEFINITIONS

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	The European Agreement Concerning the International Carriage of Dangerous Goods by Road (Economic Commission for Europe)
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition.
Biological Exposure Indices	Reference values intended as guidelines for the evaluation of potential health hazards in the practice of industrial hygiene, published by the ACGIH. BEIs represent the levels of determinants that are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.
CAL/OSHA	The Division of Occupational Safety and Health for the State of California.
CAS #	The Chemical Abstract Service Number that uniquely identifies each constituent.
CEPA	Canadian Environmental Protection Act
CERCLA	The United States Comprehensive Environmental Response, Compensation, and Liability Act, sometimes known as the Superfund Act
CFR	The US Code of Federal Regulations
CSA	The Canadian Standards Association
DOT	The United States Department of Transportation
DSL/NDSL	The Canadian Domestic/Non-Domestic Substances List
EC #	Sometimes known as the EINECS # (European Inventory of Now-Existing Chemical Substances), which uniquely identifies each constituent.
Embryotoxin	A chemical that causes damage to a developing embryo (i.e., within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines.
EN	European standards for products and services by European Committee for Standardization (Comité Européen de Normalisation).
EPA	The United States Environmental Protection Agency.
EPA Waste Number	A code developed by the EPA to identify characteristics of hazardous waste (e.g., ignitability, corrosivity, reactivity, etc.)
EU	European Union
EWC	European Waste Catalogue, a publication of the European Union, which catalogs hazardous chemical wastes.
Flash Point	Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable product with air.
HMIS	Hazardous Materials Identification System, a rating system developed by the National Paint and Coating Association that has been adopted by industry to identify the degree of chemical hazards.
H-Phrase H320	Causes eye irritation
H-Phrase H335	May cause respiratory irritation
IARC	International Agency for Research on Cancer, an agency of the World Health Organization.
IATA	International Air Transport Association

IDLH	Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30 minutes without suffering escape-preventing or permanent injury.
IMO	International Maritime Organization
LD_{50}	Lethal Dose 50%, or median lethal dose, the dose of a toxin, pathogen, or radiation required to kill half the members of a tested population after a specified test duration. The LD_{50} is frequently used as a general indicator of a substance's acute toxicity.
LEL	Lower Explosive Limit, the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.
Mutagen	A chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines.
NFPA	National Fire Protection Association, which has established a rating system for chemical hazards.
NIOSH	National Institute for Occupational Safety and Health, a Federal research agency focusing on occupational safety and health.
NTP	National Toxicology Program, an agency of the Federal Department of Health and Human Services.
OSHA	Occupational Safety and Health Administration, an agency of the United States Department of Labor.
PEL	Permissible Exposure Limit. This has the exact same meaning as TLV, except that it is enforceable by OSHA.
REL	Recommended Exposure Limit. This has the same meaning as TLV, but is a recommendation by NIOSH.
Reproductive Toxin	Any substance which interferes in any way with the reproductive process.
RID	International Regulations Concerning the Carriage of Dangerous Goods by Rail
SARA	Superfund Amendments and Reauthorization Act
SCBA	Self-Contained Breathing Apparatus
STEL	This is the 15-minute Short Term Exposure Limit reported under Threshold Limit Value and OSHA's Permissible Exposure Limit.
TC	Transport Canada
Teratogen	A chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines.
TLV	Threshold Limit Value , the airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must also be considered. See the definitions of TWA and STEL.
TSCA	The United States Toxic Substances Control Act
TWA	This is the 8-hour Time Weighted Average reported under Threshold Limit Value and OSHA's Permissible Exposure Limit.
UEL	Upper Explosive Limit, the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.
WHMIS	Canadian Workplace Hazardous Materials Information System