# Bioland Scientific LLC

## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Product name | **Stacking buffer** |
| Product Number | STA01 |
| Brand | Bioland Chemicals |
| Company | Bioland Scientific LLC<br>14925 Paramount Blvd., Suite C<br>Paramount, CA 90723<br>USA |
| Telephone | 1-562-377-2668 |
| Fax | 1-562-733-6008 |
| Emergency Phone # | 1-562-377-2668 |

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

**2.1 Mixtures**

| Component | CAS No. | EC No. | % by Weight | CLP classification Acc. To GP-CLP Regulations UK SI 2019/720, UK SI 2020/1567 |
|---|---|---|---|---|
| Water | 7732-18-5 | 231-791-2 | 91.7 | - |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | EEC No. 214-684-5 | 7.9 | - |
| Sodium lauryl sulfate | 151-21-3 | 205-788-1 | 0.4 | Flam. Sol. 2 (H228)<br>Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Dam. 1 (H318)<br>Aq. Chronic 3 (H412) |

## SECTION 3 : HAZARDS IDENTIFICATION

**3.1 Classification of the substance or mixture**
Based on available data, the classification criteria are not met

**3.2 GHS Label elements, including precautionary statements**
Based on available data, the classification criteria are not met

**3.3 Hazards not otherwise classified (HNOC) or not covered by GHS -** none

## SECTION 4 : FIRST AID MEASURES

**4.1 Description of first-aid measures**
**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Ingestion**
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Inhalation**
Remove to fresh air. Get medical attention immediately if symptoms occur.

**Self-Protection of the First Aider**
No special precautions required.

**4.2 Most important symptoms and effects, both acute and delayed**
None reasonably foreseeable.

**4.3 Indication of any immediate medical attention and special treatment needed**
Notes to Physician: Treat symptomatically.

## SECTION 5 : FIRE-FIGHTING MEASURES

**5.1 Extinguishing media**
Carbon dioxide (CO 2). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion

**5.2 Special Hazards arising from the substance or mixture**
Nitrogen oxides (NOx), Sulfur oxides, Sodium oxides.

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

**5.4 Further information**
No data available.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation. Use personal protective equipment as required.

**6.2 Environmental precautions**
Should not be released into the environment. See Section 12 for additional Ecological Information.

**6.3 Methods and materials for containment and cleaning up**
Sweep up and shovel into suitable containers for disposal.

**6.4 Reference to other sections**
Refer to protective measures listed in Sections 8 and 13.

## SECTION 7 : HANDLING AND STORAGE

**7.1 Precautions for safe handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

**7.2 Conditions for safe storage, including any incompatibilities**
Keep container tightly closed in a dry and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)

Class 12

**7.3 Specific end use(s)**
For research use only.

## SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

**Exposure limits**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Biological limit values**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)**
See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Inhalation) | Chronic effects systemic (Dermal) |
|---|---|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 ( 7.9 ) | - | - | - | DNEL = 216.6mg/kg bw/day |
| Sodium lauryl sulfate 151-21-3 ( 0.4 ) | - | - | - | DNEL = 4060mg/kg bw/day |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---|---|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 ( 7.9 ) | - | - | - | DNEL = 152.8mg/m3 |
| Sodium lauryl sulfate 151-21-3 ( 0.4 ) | - | - | - | DNEL = 285mg/m3 |

**Predicted No Effect Concentration (PNEC)**
See values below.

| Component | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|---|---|---|---|---|---|
| Sodium lauryl sulfate 151-21-3 ( 0.4 ) | PNEC = 0.176mg/L | PNEC = 6.97mg/kg sediment dw | PNEC = 0.055mg/L | PNEC = 1.35mg/L | PNEC = 1.29mg/kg soil dw |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|---|---|---|---|---|---|
| Sodium lauryl sulfate 151-21-3 ( 0.4 ) | PNEC = 0.0176mg/L | PNEC = 0.697mg/kg sediment dw | - | - | - |

### 8.2 Exposure controls

**Personal protective equipment**

**Engineering Measures**
None under normal use conditions.

**Personal protective equipment**

**Eye Protection**
Wear safety glasses with side shields (or goggles) (European standard - EN 166)
**Hand Protection**
Protective gloves
**Skin and body protection**
Long sleeved clothing.

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

**Respiratory Protection**No protective equipment is needed under normal use conditions.

**Large scale/emergency use**
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Particle filter

**Small scale/Laboratory use**
Maintain adequate ventilation

**Environmental exposure controls**
No information available.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| a) Appearance | Form: liquid |
| b) Odor | No data available |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | ()No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower | No data available |

| | | |
|---|---|---|
| flammability or explosive limits | | |
| k) Vapor pressure | No data available | |
| l) Vapor density | No data available | |
| m) Density | No data available | |
| Relative density | No data available | |
| n) Water solubility | No data available | |
| o) Partition coefficient: n-octanol/water | Substance | log Pow |
| | 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | -3.6 |
| | Sodium lauryl sulfate | 1.6 |
| p) Autoignition temperature | No data available | |
| q) Decomposition temperature | No data available | |
| r) Viscosity | No data available | |
| s) Explosive properties | No data available | |
| t) Oxidizing properties | No data available | |

**9.2 Other safety information**
No data available

## SECTION 10 : STABILITY AND REACTIVITY

**10.1 Reactivity**
None known, based on information available

**10.2 Chemical stability**
Stable under normal conditions.

**10.3 Possibility of hazardous reactions**
None under normal processing.

**10.4 Conditions to avoid**

Incompatible products. Excess heat.

**10.5 Incompatible materials**
Oxidizing agent.

**10.6 Hazardous decomposition products**
Nitrogen oxides (NOx). Sulfur oxides. Sodium oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Water | - | - | - |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | OECD 425 (Rat) LD50 > 5000 mg/kg bw | OECD 402 (Rat) LD50 > 5000 mg/kg bw | - |
| Sodium lauryl sulfate | LD50 = 1288 mg/kg ( Rat ) | LD50 = 200 mg/kg ( Rabbit ) | LC50 > 3900 mg/m3 ( Rat ) 1 h |

**Skin corrosion/irritation**
No data available

**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitization**
No data available

| Component | Test method | Test species | Study result |
|---|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 ( 7.9 ) | OECD Test Guideline 406 | guinea pig | non-sensitising |

**Germ cell mutagenicity**

| Component | Test method | Test species | Study result |
|---|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 ( 7.9 ) | OECD Test Guideline 471 Bacterial Reverse Mutation Test | Mammalian in vitro | negative |

**Carcinogenicity**

No data available

There are no known carcinogenic chemicals in this product

**Reproductive toxicity**
No data available

**Specific target organ toxicity – single exposure**

No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Symptoms / effects,both acute and delayed**
No information available.

**11.2 Additional Information**

**Endocrine Disrupting Properties**
Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity**

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|---|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | - | Daphnia Magna EC50 >100 mg/L (48h) | - |
| Sodium lauryl sulfate | 1.31 mg/L LC50 96 h<br>9.9-20.1 mg/L LC50 96 h<br>4.5 mg/L LC50 96 h<br>4.62 mg/L LC50 96 h<br>7.97 mg/L LC50 96 h<br>10.2-22.5 mg/L LC50 96 h<br>10.8-16.6 mg/L LC50 96 h<br>13.5-18.3 mg/L LC50 96 h<br>15-18.9 mg/L LC50 96 h<br>22.1-22.8 mg/L LC50 96 h<br>4.06-5.75 mg/L LC50 96 h<br>4.2-4.8 mg/L LC50 96 h<br>4.3-8.5 mg/L LC50 96 h<br>5.8-7.5 mg/L LC50 96 h<br>6.2-9.6 mg/L LC50 96 h<br>8-12.5 mg/L LC50 96 h<br>4.2 mg/L LC50 96 h | EC50: = 1.8 mg/L, 48h (Daphnia magna) | EC50: 3.59 - 15.6 mg/L, 96h static (Pseudokirchneriella subcapitata)<br>EC50: = 117 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: 30 - 100 mg/L, 96h (Desmodesmus subspicatus) EC50: = 53 mg/L, 72h (Desmodesmus subspicatus) |

| Component | Microtox | M-Factor |
|---|---|---|

| | | |
|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | OECD 209<br>EC50 > 1000 mg/L (3h) | - |
| Sodium lauryl sulfate | = 0.46 mg/L EC50 Photobacterium phosphoreum 30 min<br>= 0.72 mg/L EC50 Photobacterium phosphoreum 15 min<br>= 1.19 mg/L EC50 Photobacterium phosphoreum 5 min | - |

**12.2 Persistence and degradability**

Immiscible with water.

**12.3 Bioaccumulative potential**

May have some potential to bioaccumulate

| Component | log Pow | Bioconcentration factor (BCF) |
|---|---|---|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | -3.6 | No data available |
| Sodium lauryl sulfate | 1.6 | No data available |

**12.4 Mobility in soil**

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

**12.5 Results of PBT and vPvB assessment**

No data available for assessment.

**12.6 Endocrine disrupting properties**

This product does not contain any known or suspected endocrine disruptors

**12.7 Other adverse effects**

| | |
|---|---|
| Persistent Organic Pollutant | This product does not contain any known or suspected substance |
| Ozone Depletion Potential | This product does not contain any known or suspected substance |

## SECTION 13 : DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**Contaminated Packaging**

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

**European Waste Catalogue (EWC)**

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14 : TRANSPORT INFORMATION

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

**Further information**
Not classified as dangerous in the meaning of transport regulations.

**SECTION 15 : REGULATORY INFORMATION**

| Component | CAS No | EINECS | KECL |
|---|---|---|---|
| Water | 7732-18-5 | 231-791-2 | KE-35400 |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | 214-684-5 | KE-34819 |
| Sodium lauryl sulfate | 151-21-3 | 205-788-1 | KE-21884 |

**SECTION 16: OTHER INFORMATION**

**Product Use:**
For research use only.
**Further information**

**Full text of H-Statements referred to under sections 2 and 3**
H228 - Flammable solid
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

The information is believed to be correct but is not exhaustive and will be used solely as
a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product.

**Disclaimer:**

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