Bioland Scientific LLC

Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	**Separating or Resolving Buffer**
Product Number	RES01
Brand	Bioland Chemicals
Company	Bioland Scientific LLC 14925 Paramount Blvd., Suite C Paramount, CA 90723 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	76	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	EEC No. 214-684-5	23.6	
Sodium lauryl sulfate	151-21-3	205-788-1	0.4	Flam. Sol. 2 (H228) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aq. Chronic 3 (H412)

SECTION 3 : HAZARDS IDENTIFICATION

3.1 Classification of the substance or mixture
Not a hazardous substance or mixture

3.2 GHS Label elements, including precautionary statements
Not a hazardous substance or mixture

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)
Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.
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	Melting point: 116.7 °C (242.1 °F)	
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 flammability or explosive limits	No data available	
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	none	

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). Hydrogen chloride. 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

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

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 9.9-20.1 mg/L LC50 96 h 4.5 mg/L LC50 96 h 4.62 mg/L LC50 96 h 7.97 mg/L LC50 96 h 10.2-22.5 mg/L LC50 96 h 10.8-16.6 mg/L LC50 96 h 13.5-18.3 mg/L LC50 96 h 15-18.9 mg/L LC50 96 h 22.1-22.8 mg/L LC50 96 h 4.06-5.75 mg/L LC50 96 h 4.2-4.8 mg/L LC50 96 h 4.3-8.5 mg/L LC50 96 h 5.8-7.5 mg/L LC50 96 h	EC50: = 1.8 mg/L, 48h (Daphnia magna)	EC50: 3.59 - 15.6 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: = 117 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: 30 - 100 mg/L, 96h (Desmodesmus subspicatus) EC50: = 53 mg/L, 72h (Desmodesmus subspicatus)

	6.2-9.6 mg/L LC50 96 h 8-12.5 mg/L LC50 96 h 4.2 mg/L LC50 96 h		

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

12.2 Persistence and degradability
Miscible with water, Persistence is unlikely, based on information available

12.3 Bioaccumulative potential

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
The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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
Water	7732-18-5	231-791-2
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	214-684-5
Sodium lauryl sulfate	151-21-3	205-788-1

SECTION 16: OTHER INFORMATION

Product Use:
For research use only.
Further information
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.

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