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SECTION 1: COMPANY AND PRODUCT INFORMATION

1.1 Product identifiers

Product name : CAPS Buffer 0.5M, pH 11.0
Product code : 40320014
CAS number : 1135-40-6
Synonyms : 3-(Cyclohexylamino)-1-propanesulfonic acid

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

Identified uses : Laboratory chemicals, manufacture of substances

1.3 Details of the supplier of the safety data sheet

Address : Genelix International Inc, dba bioWORLD
4150 Tuller Rd. Suite 228
Dublin, OH 43017

Email : tech@bio-world.com

Phone : 614-792-8680, Toll free: 1-888-bio-PLUS

Fax : 614-792-8685

1.4 Emergency telephone number

Emergency phone : 1-888-bio-PLUS

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Substance/mixture is not classified as hazardous.

2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not classified as hazardous under the GHS.

2.3 Label elements and precautionary statements

Pictogram : None

Signal word : None

Hazard statement(s) : Not available

Precautionary statement(s) : No applicable precautionary statements.

2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

2.5 NFPA Rating

Health hazard : 0

Fire hazard : 0

Reactivity hazard : 0

2.6 HMIS Rating

Health hazard	: 0
Chronic health hazard	: 0
Reactivity hazard	: 0
Flammability	: 0
Physical hazard	: 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

All components of this substance are non-hazardous

3.2 Hazardous components & classification

No chemicals or constituents are known to be present that require disclosure under applicable regulations.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

In case of inhalation

Remove to fresh air Call a physician If breathing is irregular or stopped, administer artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation Artificial respiration and/or oxygen may be necessary Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician.

In case of skin contact

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

In case of eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

In case of ingestion

Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

4.3 Indication of any immediate medical attention and special treatment needed

No special treatment indicated. Provide treatment in accordance with exhibited systems.

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

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

5.2 Unsuitable extinguishing media

Not available

5.3 Special hazards arising from the substance

Carbon oxide, Nitrogen oxides, and Sulphur oxides.

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

Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For personal protection see section 8

6.2 Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into spillage if safe to do so. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

For proper disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store in cool, well ventilated area. Keep container tightly closed.

Incompatible materials : Strong oxidizing agents are incompatible with this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Engineering controls

General industrial hygiene practice.

8.3 Personal protective equipment

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection	: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	: Do not let product enter drains.
General hygiene considerations	: When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	: Clear, colorless
b) Physical states	: Liquid
c) Odor	: Not available
d) Odor threshold	: Not available
e) Melting point	: Not available
f) Boiling point range	: Not available
g) pH	: 11.0
h) Density	: Not available
i) Flash point	: Not available
j) Evaporation rate	: Not available
k) Flammability	: Not available
l) Upper/lower flammability or explosive limits:	: Not available
m) Vapor pressure	: Not available
n) Vapor density	: Not available
o) Relative density	: Not available
p) Water solubility	: Not available
q) Partition coefficient:n-octanol/water	: Not available
r) Autoignition temperature	: Not available

- s) Decomposition temperature : Not available
- t) Kinematic viscosity : Not available
- u) Explosive properties : Not available
- v) Oxidizing properties : Not available
- w) Solubility in other solvents : Not available
- x) Surface tension : Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity is known. Non-reactive under normal use.

10.2 Chemical stability

Product is stable when stored as recommended.

10.3 Stability note(s)

No special or unusual instability known.

10.4 Polymerization

No known polymerization possible.

10.5 Possibility of hazardous reactions

No known hazardous reactions are possible.

10.6 Incompatible materials

Strong oxidizing agents are incompatible with this product.

10.7 Hazardous decomposition products

Carbon oxides, Nitrogen oxides, and Sulphur oxides may be formed under fire conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50 Oral : Rat - female - >2,000 mg/kg
(OECD Test Guideline 420)

LD50 Dermal : Rat - male and female - >2,000 mg/kg
(OECD Test Guideline 402)

LC50 Inhalation : No toxicity data available.

11.2 Skin corrosion/irritation

No skin/corrosion irritation data available.

11.3 Serious eye damage/eye irritation

Bovine cornea - 4 hrs - No skin irritation
(OECD Test Guideline 437)

11.4 Respiratory or skin sensitization

Local lymph node assay - mouse - negative
(OECD Test Guideline 442B)

11.5 Germ cell mutagenicity

Ames test - Salmonella typhimurium - with and without metabolic activation - negative
(OECD Test Guideline 471)

Micronucleus test - lymphocyte - with and without metabolic activation - negative
(OECD Test Guideline 487)

Gene mutation test - mouse lymphoma cells - with and without metabolic activation - negative
(OECD Test Guideline 490)

11.6 Carcinogenicity

IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

11.7 Reproductive toxicity

No reproductive toxicity data available.

11.8 Specific target organ toxicity – single exposure

No specific organ toxicity data available.

11.9 Specific target organ toxicity – repeated exposure

No specific organ toxicity data available.

11.10 Aspiration hazard

No aspiration hazard data available.

11.11 Additional Information

RTECS: TZ6395000

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No ecological toxicity data available.

12.2 Aquatic toxicity

Static test LC50 - Danio rerio (zebra fish) - 96 hrs - >100 mg/l
(OECD Test Guideline 203)

Static test EC50 - Daphnia magna (water flea) - 48 hrs - >100 mg/l
(OECD Test Guideline 202)

Static test ErC50 - Desmodesmus subspicatus (green algae) - 72 hrs - >100 mg/l
(OECD Test Guideline 201)

12.3 Persistence and degradability

Aerobic - 28 days - 4% - Not biodegradable
(OECD Test Guideline 301F)

12.4 Bioaccumulative potential

No bioaccumulation data available.

12.5 Mobility in soil

No soil mobility data available.

12.6 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

12.7 Other adverse effect

No other adverse effect data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13.2 Packaging

Do not reuse container.

13.3 Recommendation

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

SECTION 14: TRANSPORTATION INFORMATION

14.1 DOT (US)

Not a dangerous good under DOT(US) regulations.

14.2 IMDG

Not a dangerous good under IMDG regulations.

14.3 IATA

Not a dangerous good under IATA regulations.

SECTION 15: REGULATORY INFORMATION

15.1 SARA

SARA 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.

SARA 311/312: No hazards reported.

15.2 Clean water act (CWA)

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

15.3 Right to know components

Massachusetts : No chemicals are present which require disclosure under the Massachusetts Right to Know Act.

Pennsylvania	: No chemicals are present which require disclosure under the Pennsylvania Right to Know Act.
New Jersey	: No chemicals are present which require disclosure under the New Jersey Right to Know Act.
California proposition 65 components	: This product contains no chemicals which are known to the State of California to cause cancer, or birth defects or other reproductive harm.

SECTION 16: OTHER INFORMATION

16.1 Disclaimer

This product is offered by bioWORLD for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall bio-WORLD.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if bio-WORLD.com has been advised of the possibility of such damages.

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16.2 Preparation Information

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