

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: April 22, 2021

1 Identification

- **Product identifier**
- **Trade name:** Polymer Buffer
- **Product code:** AR-1065-60
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:**
No relevant information available.
Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
Aqua Analytics
245 Matheson Blvd East Units 1 & 2,
Mississauga, ON L4Z 3C9
(888) 712-4000
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Met. Corr.1 H290 May be corrosive to metals.
- Acute Tox. 4 H332 Harmful if inhaled.
- Skin Corr. 1B H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 H318 Causes serious eye damage.
- STOT RE 2 H373 May cause damage to the respiratory tract through prolonged or repeated exposure.
Route of exposure: Inhalation.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS05 GHS07 GHS08

· Signal word: Danger

· Hazard statements:

H290 May be corrosive to metals.

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H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.

Precautionary statements:

P234 Keep only in original container.

P260 Do not breathe mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment - See Section 4 of this Safety Data Sheet.

P314 Get medical advice/attention if you feel unwell.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.







P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Components:

7732-18-5	Water	74.34%
6381-92-6	Disodium dihydrogen ethylenediaminetetraacetate  STOT RE 2, H373  Acute Tox. 4, H332	13.96%
6132-04-3	Sodium citrate, dihydrate	7.50%
1310-73-2	Sodium hydroxide  Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	2.70%
141-43-5	2-aminoethanol  Skin Corr. 1B, H314; Eye Dam. 1, H318  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335  Flam. Liq. 4, H227	1.50%

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

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- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
- **After inhalation:**
Supply fresh air.
Seek immediate medical advice.
Provide oxygen treatment if affected person has difficulty breathing.
If experiencing respiratory symptoms: Call a doctor.
- **After skin contact:**
Immediately remove any clothing soiled by the product.
Immediately rinse with water.
If skin irritation continues, consult a doctor.
Seek immediate help for blistering or open wounds.
- **After eye contact:**
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for 15 to 20 minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Breathing difficulty
Coughing
Strong caustic effect on skin and mucous membranes.
Danger of severe eye injury.
Gastric or intestinal disorders when ingested.
- **Danger:**
Harmful if inhaled.
Danger of gastric perforation.
Causes serious eye damage.
May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Indication of any immediate medical attention and special treatment needed:**
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.

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Wear fully protective suit.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

- **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Methods and material for containment and cleaning up**

Wipe up small spills with paper towel and discard.

For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.

Rinse remainder away with copious quantities of water.

Send for recovery or disposal in suitable receptacles.

- **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.

7 Handling and storage

- **Handling**

- **Precautions for safe handling:**

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

Unsuitable material for receptacle: aluminium.

Unsuitable material for receptacle: glass or ceramic.

Unsuitable material for receptacle: steel.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from metals.

Do not store together with acids.

Store away from oxidizing agents.

- **Further information about storage conditions:** Keep containers tightly sealed.

- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

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· **Components with limit values that require monitoring at the workplace:**

1310-73-2 Sodium hydroxide

PEL (USA)	Long-term value: 2 mg/m ³
REL (USA)	Ceiling limit value: 2 mg/m ³
TLV (USA)	Ceiling limit value: 2 mg/m ³
EL (Canada)	Ceiling limit value: 2 mg/m ³
EV (Canada)	Ceiling limit value: 2 mg/m ³
LMPE (Mexico)	Ceiling limit value: 2 mg/m ³

141-43-5 2-aminoethanol

PEL (USA)	Long-term value: 6 mg/m ³ , 3 ppm
REL (USA)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 8 mg/m ³ , 3 ppm
TLV (USA)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 7.5 mg/m ³ , 3 ppm
EL (Canada)	Short-term value: 6 ppm Long-term value: 3 ppm
EV (Canada)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 7.5 mg/m ³ , 3 ppm
LMPE (Mexico)	Short-term value: 6 ppm Long-term value: 3 ppm

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Suitable respiratory protective device recommended.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

A recommendation for a suitable glove material is not available. Testing will be required to determine the suitability of any potential glove materials.

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures** No relevant information available.

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid
Color: According to product specification

· Odor: Characteristic

· Odor threshold: Not determined.

· pH-value: Alkaline

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: >100 °C (>212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Non-oxidizing.

· Vapor pressure: Not determined.

· Density:

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

· Other information: No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

· **Chemical stability:** Stable under normal temperatures and pressures.

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

· **Possibility of hazardous reactions**

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- Exothermic reaction with acids.
- Toxic fumes may be released if heated above the decomposition point.
- Corrosive action on metals.
- Reacts with oxidizing agents.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
 - Metals.
 - Acids.
 - Oxidizing agents.
- **Hazardous decomposition products**
 - Under fire conditions only:
 - Carbon monoxide and carbon dioxide
 - Nitrogen oxides
 - Metal oxide smoke.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Harmful if inhaled.

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	17490 mg/kg (rat)
Dermal	LD50	66667 mg/kg (rabbit)
Inhalative	LC50/4h	10.6 mg/l

6381-92-6 Disodium dihydrogen ethylenediaminetetraacetate

Oral	LD50	2800 mg/kg (rat)
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141-43-5 2-aminoethanol

Oral	LD50	2050 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rabbit)

- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:** Strong caustic effect.
- **Sensitization:** Based on available data, the classification criteria are not met.

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

- **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):**

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Causes severe skin burns and eye damage.

Harmful if inhaled.

- **Repeated dose toxicity:** Possible risk of irreversible effects.
- **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-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:**
May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

· Aquatic toxicity

141-43-5 2-aminoethanol

EC50 65 mg/l (daphnia)

- **Persistence and degradability** Biodegradable.
- **Bioaccumulative potential:** The product is not expected to bioaccumulate in soil or water organisms.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· Uncleaned packagings

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number

· DOT, ADR/RID/ADN, IMDG, IATA

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· **UN proper shipping name**
 · **DOT** Corrosive liquids, n.o.s. (Sodium hydroxide, Ethanolamine)
 · **ADR/RID/ADN, IMDG, IATA** CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, ETHANOLAMINE)

· **Transport hazard class(es)**

· **DOT**



· **Class** 8
 · **Label** 8

· **ADR/RID/ADN**



· **Class** 8 (C9)
 · **Label** 8

· **IMDG, IATA**



· **Class** 8
 · **Label** 8

· **Packing group**

· **DOT, ADR/RID/ADN, IMDG, IATA** II

· **Environmental hazards** Not applicable.

· **Special precautions for user** Warning: Corrosive substances

· **Hazard identification number (Kemler code):** 80

· **EMS Number:** F-A,S-B

· **Segregation groups** Alkalis

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

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· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

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: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Liq. 4: Flammable liquids – Category 4

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

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Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers