Hardness Buffer Solution

SECTION 1: Identification

Product identifier

Product name: Hardness Buffer Solution
Product code: MTK-724-02-F

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:	**Supplier:**
United States	**United States**
AquaPhoenix Scientific	Dubois Chemicals Inc.
860 Gitts Run Road	3630 East Kemper Rd
Hanover	Cincinnati
PA 17331	OH 45241
(717) 632-1291	(800) 438-2647

Emergency telephone number:

United States

Emergency Phone No. (800) 255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Skin corrosion, category 1A

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse.
P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P405 Store locked up.
P501 Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Water	>83
CAS number: 141-43-5	2-Aminoethanol	10
CAS number: 1313-84-4	Sodium Sulfide, Nonahydrate	0.5

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:
Not determined or not applicable.

After inhalation:
Move exposed individual to fresh air
Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:
Immediately remove all contaminated clothing
Wash affected area with soap and water
Immediately call a POISON CONTROL CENTER or seek medical attention

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes
Remove contact lens(es) if able to do so during rinsing
Immediately call a POISON CONTROL CENTER or seek medical attention

After swallowing:
Immediately call a POISON CONTROL CENTER or seek medical attention
Do not induce vomiting
Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:
Not determined or not applicable.

Delayed symptoms and effects:
Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:
Not determined or not applicable.

Hardness Buffer Solution

Notes for the doctor:
Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:
Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:
Not determined or not applicable.

Specific hazards during fire-fighting:
Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:
Wear protective eye wear, gloves and clothing
Refer to Section 8
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:
Heating causes a rise in pressure, risk of bursting and combustion
Shut off sources of ignition
Carbon monoxide and carbon dioxide may form upon combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:
Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:
Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)
Dispose of contents / container in accordance with local regulations

Reference to other sections:
Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:
Do not eat, drink, smoke or use personal products when handling chemical substances.
Avoid breathing mist or vapor.
Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:
Store in a cool, well-ventilated area.
Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Hardness Buffer Solution

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	2-Aminoethanol	141-43-5	NIOSH REL TWA 3 ppm (8 mg/m³)
	2-Aminoethanol	141-43-5	NIOSH REL ST 6 ppm (15 mg/m³)
United States (OSHA)	2-Aminoethanol	141-43-5	OSHA PEL TWA 3 ppm (6 mg/m³)

Biological limit values:
No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:
Not determined or not applicable.

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.

Respiratory protection:
When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:
Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.
Perform routine housekeeping.
Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colorless to pale yellow liquid
Odor	Odorless to amine odor
Odor threshold	Not available
pH	Not available
Melting point/freezing point	Not available
Initial boiling point/range	Not available
Flash point (closed cup)	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper flammability/explosive limit	Not available
Lower flammability/explosive limit	Not available
Vapor pressure	Not available
Vapor density	Not available
Density	Not available
Relative density	Not available
Solubilities	Not determined or not available.

Hardness Buffer Solution

Partition coefficient (n-octanol/water)	Not available
Auto/Self-ignition temperature	Not available
Decomposition temperature	Not available
Dynamic viscosity	Not available
Kinematic viscosity	Not available
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.
Chemical stability:
Stable under normal conditions of use and storage.
Possibility of hazardous reactions:
None under normal conditions of use and storage.
Conditions to avoid:
None known.
Incompatible materials:
None known.
Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
2-Aminoethanol	dermal	LD50 - Rat - 1000 mg/kg
	inhalation	LC50 - Mouse - >2420 mg/m³/2H
	oral	LD50 - Mouse - 700 mg/kg

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
2-Aminoethanol	Causes severe skin burns and eye damage.
Sodium Sulfide, Nonahydrate	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

Hardness Buffer Solution

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Carcinogenicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
International Agency for Research on Cancer (IARC): None of the ingredients are listed.
National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Reproductive toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Specific target organ toxicity (single exposure)
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Specific target organ toxicity (repeated exposure)
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Aspiration toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Information on likely routes of exposure: No data available.
Symptoms related to the physical, chemical and toxicological characteristics: No data available.
Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data:

Name	Result
Sodium Sulfide, Nonahydrate	EC50 - Palaemonetes pugio (Daggerblade Grass Shrimp) - 0.410 mg/L - 48 h

Chronic (long-term) toxicity
Product data: No data available.
Substance data: No data available.

Persistence and degradability
Product data: No data available.
Substance data: No data available.

Hardness Buffer Solution

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	8 
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	8 
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	8 
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None

Hardness Buffer Solution

Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

141-43-5	2-Aminoethanol	Listed
7732-18-5	Water	Listed
1313-84-4	Sodium Sulfide, Nonahydrate	Not Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals: Not determined.

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

1313-84-4	Sodium Sulfide	Not Listed
141-43-5	2-Aminoethanol	Listed
7732-18-5	Water	Not Listed

New Jersey Right to Know:

1313-84-4	Sodium Sulfide	Listed
141-43-5	2-Aminoethanol	Not Listed
7732-18-5	Water	Not Listed

New York Right to Know:

1313-84-4	Sodium Sulfide	Not Listed
141-43-5	2-Aminoethanol	Listed
7732-18-5	Water	Not Listed

Pennsylvania Right to Know:

1313-84-4	Sodium Sulfide	Not Listed
141-43-5	2-Aminoethanol	Listed
7732-18-5	Water	Not Listed

California Proposition 65: Not determined.

Hardness Buffer Solution

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

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End of Safety Data Sheet