

# MATERIAL SAFETY DATA SHEET

Water Hardness Buffer

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Water Hardness Buffer

Product Code: 9770

Material Uses:

Manufacturer: Science Stuff  
1104 Newport Ave

Austin, TX 78753

(512) 837-6020

Entry Date : 7/2/2013

Print Date: 7/2/2013

24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	3
Flammability:	0
Reactivity:	0

Hazard Rating:  
Least Slight Moderate High Extreme  
0 1 2 3 4  
NA=Not Applicable NE=Not Established

## SECTION 2 HAZARD IDENTIFICATION

May be harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling.

## SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Ammonium Chloride	CAS# 12125-02-9	6.8%	W/V	None established
<input type="checkbox"/>	Ammonium Hydroxide 28-30% w/w	CAS# 1336-21-6	57.2%	V/V	None established
<input type="checkbox"/>	Ethylenediaminetetra-acetic acid	CAS# 29932-54-5	0.5%	W/V	None Established
<input type="checkbox"/>	Water, Deionized ASTM Type II	CAS# 7732-18-5	Balance	V/V	None Established

## SECTION 4 FIRST AID MEASURES

May be harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. if irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

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**SECTION 5 FIRE FIGHTING MEASURES**

Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire  
Fire / Explosion Hazards: Thermal decomposition produces highly toxic fumes.  
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Absorb spill with inert material, then place in a chemical waste container. Neutralize with a weak acid.

**SECTION 7 HANDLING AND STORAGE**

Store in a cool, dry, well-ventilated place away from incompatible materials. Wash thoroughly after handling.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory Protection: NIOSH/MSHA-approved respirator  
Ventilation  
Local Exhaust   
Mechanical   
Protective Gloves: NIOSH Approved Gloves  
Eye Protection: Goggles and Face Shield  
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point:	Information not available	Percent Volatile by Volume:	>90
Boiling Point:	Information not available	Evaporation Rate	Information not available
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information not available	Auto Ignition Temp	Not applicable
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	Clear liquid with ammonia odor	Upper Flamm. Limit in Air	Not applicable
Flash Point:	Not applicable		
Specific Gravity:	Information not available		

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

Stability: Stable  
Conditions to Avoid: Avoid contact with incompatible materials.

## Water Hardness Buffer

Materials to Avoid:	Strong oxidizers, halogens, bleaches
Hazardous Decomposition Products:	Ammonia
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

### SECTION 11 Toxicological Information

Chronic effects on humans: Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

Other toxic effects on humans: Extremely hazardous in case of ingestion, of inhalation (lung irritant).

Very hazardous in case of skin contact (corrosive), of eye contact (corrosive).  
Hazardous in case of inhalation (lung corrosive).

Carcinogenic effects: No significant effects or critical hazards.

Mutagenic effects: No significant effects or critical hazards.

Teratogenicity/Reproductive toxicity: No significant effects or critical hazards.

Ingestion: May cause burns to mouth, throat and stomach.

Inhalation: Severely irritating to respiratory system.

Eyes: Corrosive to eyes.

Skin: Corrosive to the skin.

### SECTION 12 Ecological Information

Ammonia

Cyprinus carpio (LC50)	96 hours	0.44 mg/l
Cyprinus carpio (LC50)	96 hours	0.66 mg/l
Lepomis macrochirus (LC50)	96 hours	1.17 mg/l
Poecilia reticulata (LC50)	96 hours	71.1 mg/l
Poecilia reticulata (LC50)	96 hours	74.2 mg/l
Poecilia reticulata (LC50)	96 hours	128.2 mg/l

Environmental precautions: Very toxic to aquatic organisms.

Products of degradation: These products are nitrogen oxides (NO, NO<sub>2</sub> etc).

Toxicity of the products of degradation are less toxic than the product itself.

### SECTION 13 Disposal Considerations

Waste disposal: the generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

### SECTION 14 Transport Information

DOT Classification: UN1760, Corrosive Liquid, n.o.s. (Ammonium Hydroxide) 8, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

### SECTION 15 Regulatory Information

United States

HCS Classification:  
Target organ effects  
Corrosive material  
Highly toxic material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed

## Water Hardness Buffer

SARA 302/304/311/312 extremely hazardous substances: Ammonia  
SARA 302/304 emergency planning and notifications: Ammonia  
SARA 302/304/311/312 hazardous chemicals: Ammonia  
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Ammonia  
Sudden release of pressure,  
Immediate (acute) health hazard  
Clean Water Act (CWA) 307: No products were found.  
Clean Water Act (CWA) 311: Ammonia  
Clean Air Act (CAA) 112 accidental release prevention: Ammonia  
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.  
Clean Air Act (CAA) 112 regulated toxic substance: Ammonia

SARA 313  
Form R – Reporting Requirements: Ammonia  
CAS number : 7664-41-7 Concentration : 25-30  
Supplier notification : Ammonia  
CAS number : 7664-41-7 Concentration : 25-30

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations:

Pennsylvania RTK: Ammonia  
(environmental hazard, generic environmental hazard);

Massachusetts RTK: Ammonia

New Jersey: Ammonia, Water

Canada

WHMIS (Canada) :

Class D-1B: Material causing immediate and serious toxic effects (Toxic)

Class E: Corrosive material

CEPA DSL/ CEPA NDSL : CEPA DSL: Ammonia, Water

### SECTION 16 Additional Information

Flammability

Health

Reactivity

Revisions	NFPA	
5/29/2012	0.1	Revised from anhydrous magnesium edta to hydrated material and updated to 16 section MSDS. LS

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