Test Kit Contents 1 of 5 ANDPTK1200

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.25.2015

Hardness Titrant, Low

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Hardness Titrant, Low**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **ANDED2073-B**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Anderson Chemical Company
325 South David Avenue, Litchfield, MN 55355
(320) 693-2477

Emergency telephone number:

Anderson Chemical Company Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

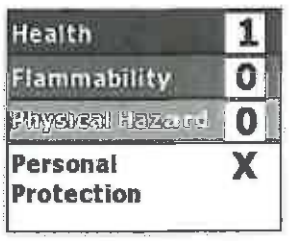
Not classified for physical or health hazards under GHS.

Hazard statements:
Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

Other Non-GHS Classification:

WHMIS
NFPA/HMIS

NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7732-18-5	Deionized Water	98.53 %

CAS 6381-92-6	Disodium Dihydrogen	1.15 %
CAS 1310-73-2	Sodium Hydroxide	0.16 %
CAS 15954-95-7	Dihydrogen Magnesium EDTA	0.1 %
CAS 7791-18-6	Magnesium Chloride,Hexahydrate	0.06 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Get medical assistance if cough or other symptoms appear.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.Immediately get medical assistance.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Never give anything by mouth to an unconscious person.Get medical assistance.

Most important symptoms and effects, both acute and delayed:

Irritation.Headache.Nausea.Shortness of breath.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Absorb with suitable material and treat as normal refuse. Small amounts may be flushed with excess water to sewer.Always obey local regulations.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.Containerize for disposal. Refer to Section 13.If necessary use trained response staff or contractor. Evacuate personnel to

safe areas. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed.Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters: No applicable occupational exposure limits

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.

Respiratory protection: Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.

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

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure**:	Not Determined

Odor threshold:	Not Determined	**Vapor density**:	>1
pH-value:	8-10	**Relative density**:	Not Determined
Melting/Freezing point:	Approx 0°C	**Solubilities**:	Infinite solubility
Boiling point/Boiling range:	Approx 100°C	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.
Incompatible materials: Strong oxidizing agents.Copper.Aluminum.
Hazardous decomposition products: Carbon oxides.Nitrogen oxides.

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	6381-92-6	LD50 oral-rat: 2000mg/kg (EDTA Disodium Anhydrous)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Dilute with water and flush to sewer. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

Not Regulated

UN proper shipping name

Not Regulated

Transport hazard class(es)
Packing group:Not Regulated
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

6381-92-6 EDTA Disodium Dihydrate 5000 lbs

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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.Note:. 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.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date : 01.25.2015
Last updated : 06.01.2015

ANDPTR1200

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.25.2015

Hardness Titrant, High

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Hardness Titrant, High**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **ANDED2070-B**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Anderson Chemical Company
325 South David Avenue, Litchfield, MN 55355
(320) 693-2477

Emergency telephone number:

Anderson Chemical Company Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Not classified for physical or health hazards under GHS.

Hazard statements:

Precautionary statements:

If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

Other Non-GHS Classification:

WHMIS

NFPA/HMIS

NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7732-18-5	Deionized Water	94 %

CAS 6381-92-6	Disodium Dihydrogen	5 %
CAS 1310-73-2	Sodium Hydroxide	0.8 %
CAS 15954-95-7	Dihydrogen Magnesium EDTA	0.1 %
CAS 7791-18-6	Magnesium Chloride,Hexahydrate	0.1 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Get medical assistance if cough or other symptoms appear.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.Immediately get medical assistance.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Never give anything by mouth to an unconscious person.Get medical assistance.

Most important symptoms and effects, both acute and delayed:

Irritation.Headache.Nausea.Shortness of breath.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Absorb with suitable material and treat as normal refuse. Small amounts may be flushed with excess water to sewer.Always obey local regulations.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.Containerize for disposal. Refer to Section 13.If necessary use trained response staff or contractor. Evacuate personnel to

safe areas. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed.Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters:	No applicable occupational exposure limits
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.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing.Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure**:	Not Determined

Odor threshold:	Not Determined	**Vapor density**:	>1
pH-value:	8-10	**Relative density**:	Not Determined
Melting/Freezing point:	Approx 0°C	**Solubilities**:	Infinite solubility
Boiling point/Boiling range:	Approx 100°C	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.
Incompatible materials: Strong oxidizing agents.Copper.Aluminum.
Hazardous decomposition products: Carbon oxides.Nitrogen oxides.

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	6381-92-6	LD50 oral-rat: 2000mg/kg (EDTA Disodium Anhydrous)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Dilute with water and flush to sewer. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

Not Regulated

UN proper shipping name

Not Regulated

Transport hazard class(es)
Packing group:Not Regulated
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

6381-92-6 EDTA Disodium Dihydrate 5000 lbs
1310-73-2 Sodium Hydroxide 1000 lb

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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.Note:. 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.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date : 01.25.2015
Last updated : 06.01.2015

ANDPTR1200

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 02.18.2015

Trace Hardness Titrant

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Trace Hardness Titrant**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **ANDED2064-B**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Anderson Chemical Company
325 South David Avenue, Litchfield, MN 55355
(320) 693-2477

Emergency telephone number:

Anderson Chemical Company Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Not classified for physical or health hazards under GHS.

Hazard statements:

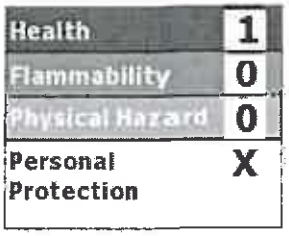
Precautionary statements:

If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

Other Non-GHS Classification:

WHMIS
NFPA/HMIS

NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7732-18-5	Deionized Water	99.41 %

CAS 6381-92-6	Disodium Dihydrogen	0.35 %
CAS 7791-18-6	Magnesium Chloride, Hexahydrate	0.06 %
CAS 1310-73-2	Sodium Hydroxide, ACS	0.06 %
CAS Not available	Dihydrogen Magnesium EDTA	0.1 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Loosen clothing and place exposed in a comfortable position.Seek medical assistance if cough or other symptoms appear.

After skin contact: Continue rinsing while removing contaminated clothing and shoes.Immediately seek medical attention.Wash hands and exposed skin with soap and plenty of water. Rinse or flush skin/hair gently with water for at least 30 minutes.

After eye contact: Protect unexposed eye.Remove contact lenses while rinsing.Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids.Seek immediate medical attention (ophthalmologist)

After swallowing: Immediately seek medical attention.Rinse mouth with water.Do not induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, pulmonary edema . Vomiting.Irritation.Shortness of breath.Headache.Nausea.Dizziness.;Stomach - Irregularities - Based on Human Evidence

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment.Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste.Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13.Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location.Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection




Control Parameters:	1310-73-2, Sodium hydroxide, ACGIH TLV Ceiling 2 mg/m3
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.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.
Eye protection:	Face shield and tight fitting goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
General hygienic measures:	Perform routine housekeeping.Wash hands before breaks and immediately after handling the product.Avoid contact with skin, eyes, and clothing.Before rewearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear, colorless liquid.	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Not Determined	**Vapor pressure**:	Not Determined
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	<2	**Relative density**:	Not Determined
Melting/Freezing point:	Approximately 0 °C	**Solubilities**:	Soluble in water
Boiling point/Boiling range:	Approximately 100 °C	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Reacts violently with Cyclopentadiene, Cyclopentanone oxime, Nitroaryl amines, Hexalithium disilicide, Phosphorous(III) oxide, Powdered metals
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.
Incompatible materials: Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts,Permanganates (potassium permanganate), Hydrogen peroxide, Azides, Perchlorates., Nitromethane, Phosphorous, Cyclopentadiene, Cyclopentanone oxime, Nitroaryl amines, Hexalithium disilicide, Phosphorous(III) oxide, Powdered metals
Hazardous decomposition products: Sulfur oxides.

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	7664-93-9	LD50 Oral - Rat - 2,140 mg/kg
Inhalation:	7664-93-9	LC50 Inhalation - Rat - 2 h - 510 mg/m3
Oral:	6283-63-2	LD50 Oral - rat - 497 mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation:		
Dermal:	7664-93-9	Skin - Rabbit Result: Extremely corrosive and destructive to tissue
Ocular:	7664-93-9	Eyes - Rabbit Result: Corrosive to eyes
Sensitization:		No additional information.

Single Target Organ (STOT):	No additional information.
Numerical Measures:	No additional information.
Carcinogenicity:	No additional information.
Mutagenicity:	No additional information.
Reproductive Toxicity:	No additional information.

SECTION 12 : Ecological information

Ecotoxicity

7664-93-9: LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h

7664-93-9: EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.Contact a licensed professional waste disposal service to dispose of this material.Dispose of empty containers as unused product.Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.Neutralize with soda ash or calcium carbonate.

SECTION 14 : Transport information

UN-Number

Not Regulated

UN proper shipping name

Not Regulated

Transport hazard class(es)
Packing group:Not Regulated
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1310-73-2 Sodium Hydroxide 5000 lbs

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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. Note: . 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.

GHS Full Text Phrases:

Abbreviations and acronyms:

Effective date : 02.18.2015
Last updated : 05.29.2015

4 of 5 AND PTK1200

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2015

Hardness Indicator Powder

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Hardness Indicator Powder**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **ANDHA7475-H**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Anderson Chemical Company
325 South David Avenue, Litchfield, MN 55355
(320) 693-2477

Emergency telephone number:

Anderson Chemical Company Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): Combustible dust

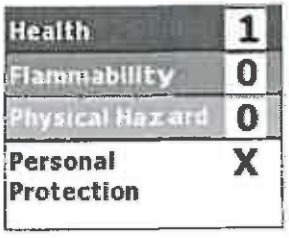
Hazard statements:
Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

GHS:
Not a hazardous substance or mixture according to Regulation.
Combustible Dust Hazard: :
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

WHMIS
NFPA/HMIS

NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 57-50-1	Sucrose, ACS	99.5 %
CAS 1787-61-7	Eriochrome Black T	0.5 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Seek medical advice if discomfort or irritation persists.Move exposed individual to fresh air.

After skin contact: Wash affected area with soap and water. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Get medical assistance.

Most important symptoms and effects, both acute and delayed:

Nausea.Headache.Shortness of breath.Irritation.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

May form combustible dust concentrations in air.

Advice for firefighters:

Protective equipment: Use NIOSH-approved respiratory protection/breathing apparatus.Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.Use spark-proof tools and explosion-proof equipment.Ensure adequate ventilation.Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Always obey local regulations.Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Minimize dust generation and accumulation. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas.Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Provide ventilation for containers. Keep container tightly sealed.Protect from freezing and physical damage.Store away from food.Store in a cool location.

SECTION 8 : Exposure controls/personal protection

Control Parameters:	57-50-1, Sucrose, ACS, ACGIH: 10 mg/m3 TWA 57-50-1, Sucrose, ACS, NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Wear protective clothing.
Eye protection:	Safety glasses with side shields.
General hygienic measures:	Perform routine housekeeping to prevent dust generation.Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Before wearing wash contaminated clothing.Wear protective eyeware, gloves, and clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Purplish colored powder	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure**:	Not Determined
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	Not Determined	**Relative density**:	Approx 2

Melting/Freezing point:	Not Determined	**Solubilities**:	12 g/100mL
Boiling point/Boiling range:	Not Determined	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: None under normal processing.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.
Incompatible materials: Strong oxidizers.
Hazardous decomposition products: Acrid, irritating, and fumes.Carbon oxides.Sulfur oxides.Nitrogen oxides.Potassium oxides.hydrogen oxides

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	sucrose	LD50 Rat: 29700mg/kg
Oral:	Eriochrome Black T	LD50 Rat: 17590 mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability: Not persistant.
Bioaccumulative potential: Readily biodegradable.
Mobility in soil: -3.67 log Pow (sucrose)
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.Dispose of empty containers as unused product.Contact a licensed professional waste disposal service to dispose of this material.

SECTION 14 : Transport information

UN-Number

Not Dangerous Goods

UN proper shipping name

Not Dangerous Goods

Transport hazard class(es)
Packing group:Not Dangerous Goods
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
IATA: International Air Transport Association
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date : 01.27.2015
Last updated : 06.02.2015

Safety Data Sheet

ANDPTK1200

according to 29CFR1910/1200 and GHS Rev. 3

Hardness Buffer Solution

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Hardness Buffer Solution**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **ANDHA7405-A**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Anderson Chemical Company
325 South David Avenue, Litchfield, MN 55355
(320) 693-2477

Emergency telephone number:

Anderson Chemical Company Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Corrosive
Skin corrosion, category 1B

Environmentally Damaging
Acute hazards to the aquatic environment, category 1

Irritant
Eye irritation, category 2A
Acute toxicity (oral, dermal, inhalation), category 4
Specific target organ toxicity following single exposure, category 3

Acute Tox. 4
Eye Irrit. 2
STOT SE 3
AcAq Tox 1
Skin Corr. 1B

Signal word :Danger

Hazard statements:
Causes severe skin burns and eye damage
May cause respiratory irritation
Harmful if swallowed
Causes serious eye irritation
Very toxic to aquatic life

Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

Do not breathe dust/fume/gas/mist/vapours/spray
Wash ... thoroughly after handling
Avoid release to the environment
Use personal protective equipment as required
Wear protective gloves/protective clothing/eye protection/face protection
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Rinse mouth
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
Continue rinsing
If eye irritation persists get medical advice/attention
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Collect spillage
Specific treatment (see supplemental first aid instructions on this label)
Wash contaminated clothing before reuse
Store locked up
Store in a dry place
Store in a well ventilated place. Keep container tightly closed
Dispose of contents/container to ...

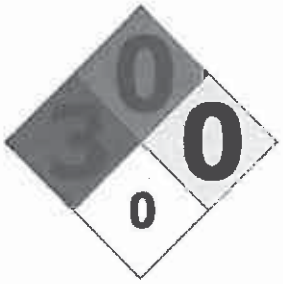
Combustible Dust Hazard: :
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

WHMIS

E

NFPA/HMIS



NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide, ACS	50.34 %
CAS 12125-02-9	Ammonium Chloride	6.76 %

CAS 29932-54-5	Disodium Magnesium EDTA	0.59 %
CAS 6381-92-6	Dihydrogen Magnesium EDTA	0.5 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position.If breathing difficult, give oxygen.Get medical assistance if cough or other symptoms appear.Loosen clothing as necessary and position individual in a comfortable position.Give artificial respiration if necessary.

After skin contact: Wash affected area with soap and water. Seek medical advice if discomfort or irritation persists.Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Get medical assistance.

After eye contact: Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse or flush exposed eye gently using water for 15-20 minutes. Immediately get medical assistance.

After swallowing: Rinse mouth thoroughly. Have exposed individual drink sips of water. Dilute mouth with water or milk after rinsing.Get medical assistance.Do not induce vomiting. Never give anything by mouth to an unconscious person.Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Shortness of breath.Nausea,Headache, Irritation.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.If seeking medical attention, provide SDS document to physician.If seeking medical attention, provide SDS document to physician.Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing.

Additional information (precautions): Ensure adequate ventilation.Avoid contact with skin, eyes, and clothing.Avoid generating dust. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.When necessary use NIOSH approved breathing equipment.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Do not let product enter drains.

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. If necessary use trained response staff or contractor. Wear protective eyeware, gloves, and clothing. Refer to Section 8.Clean up spills immediately observing precautions.Sweep up and containerize for disposal. Always obey local regulations.Dispose of empty containers as unused product. Refer to Section 13.Absorb with suitable material. Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.For disposal instructions refer to Section 13.If necessary use trained response staff or contractor. Sweep up and shovel.Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Wash hands after handling. Use only in well ventilated areas.Avoid contact with eyes, skin, and clothing. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Do not eat, drink, smoke, or use personal products when handling chemical substances. Minimize dust generation and accumulation. Wash hands after handling. Wear protective eyeware, gloves, and clothing. Refer to Section 8.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store with like hazards. Store away from incompatible materials. Refer to Section 5.Protect from freezing and physical damage.Store in a cool location. Provide ventilation for containers. Store away from oxidizing agents.Keep container tightly sealed.Store in a cool location. Provide ventilation for containers. Keep container tightly sealed.

SECTION 8 : Exposure controls/personal protection

Control Parameters:

1336-21-6, Ammonium Hydroxide, ACGIH TLV: 17 mg/m3
1336-21-6 , Ammonium Hydroxide , OSHA PEL: 35 mg/m3
1336-21-6, Ammonium Hydroxide, OSHA TWA 25 ppm (18 mg/m3) ST 35 ppm (27 mg/m3)
12125-02-9, Ammonium Chloride , ACGIH TLV: 10mg/m3

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Normal ventilation is adequate.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.Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are refer to Section 6.When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Wear protective clothing.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures: Wash hands before breaks and at the end of work. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.Before wearing again wash contaminated clothing.Perform routine housekeeping to prevent dust generation.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear, colorless liquid.	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Ammonia-like	**Vapor pressure**:	Not Determined
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	Not Determined	**Relative density**:	Approx 1
Melting/Freezing point:	Not Determined	**Solubilities**:	Infinite solubility in water.
Boiling point/Boiling range:	Not Determined	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: None under normal processing.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: Reacts explosively with potassium chlorate or bromine trifluoride. Reacts violently with bromide pentafluoride, ammonium compounds, nitrates, and iodine heptafluoride.Hazardous decomposition products formed under fire conditions.
Conditions to avoid:
Incompatible materials: Strong acids.Strong bases.Silver salts.Strong oxidizers.
Hazardous decomposition products: Ammonia.Hydrogen chloride.Magnesium oxide.Carbon oxides (CO, CO2).Nitrogen oxides (NOx), sodium oxides.

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	LD50: 350 mg/kg (rat)	Ammonium Hydroxide (1336-21-6)
Oral:	LD50:1650 mg/kg (rat)	Ammonium Chloride (12125-02-9)
Oral:	LD50: 2000 mg/kg (rat)	Disodium Anhydrous (6381-92-6)
Chronic Toxicity: No additional information.		

Corrosion Irritation: No additional information.	
Sensitization:	No additional information.
Single Target Organ (STOT):	No additional information.
Numerical Measures:	No additional information.
Carcinogenicity:	No additional information.
Mutagenicity:	No additional information.
Reproductive Toxicity:	No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability: Not persistant.
Bioaccumulative potential: No information available.Not readily biodegradable.
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Dilute with water and flush to sewer. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.Do not allow product to reach sewage system or open water.Offer surplus and non-recyclable solutions to a licensed disposal company.Dispose of empty containers as unused product.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

UN-Number

2672

UN proper shipping name

Ammonia Solution,

Transport hazard class(es)

Class:
8 Corrosive substances

Packing group:III
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

29932-54-5 Not Regulated.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1336-21-6 Ammonium Hydroxide 1000 lbs
12125-02-9 Ammonium Chloride 5000 lbs

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

12125-02-9 Not Regulated.
29932-54-5 Not Regulated.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
PNEC: Predicted No-Effect Concentration (REACH)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
CFR: Code of Federal Regulations (USA)
HMIS: Hazardous Materials Identification System (USA)
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