

Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

Product Name	Ammonium Acetate Buffer Solution
NCL Catalog Number	A-16
Product Description	Laboratory chemical, APHA for Iron.
Supplier	
NCL of Wisconsin, Inc.	Telephone: 1-800-648-7836 Fax: 715-449-2454
P.O. Box 8	Emergency Contact: 1-800-424-9300 (Chemtrec)
Biramwood, WI 54414	Email: nclabs@nclabs.com

SECTION 2: HAZARDS IDENTIFICATION**GHS Classification**

Flammable Liquids	Category 3
Skin Corrosion	Category 1B
Eye Damage	Category 1

**Signal Word**

Danger

Hazard Statements

H226	Flammable liquid and vapor.
H314	Causes severe skin burns and eye damage.

Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe mist/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P280	Wear protective clothing, protective gloves, eye protection, and 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.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor.
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 or doctor.
P370+P378	In case of fire: Use carbon dioxide (CO ₂), powder, or alcohol-resistant foam to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to comply with local, state and federal regulations.

Other Hazards Not Contributing to the Classification

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity Not applicable

Common Name Not applicable

Mixture

Name	CAS #	Approximate %
Acetic Acid	64-19-7	64
Ammonium Acetate	631-61-8	23
Water	7732-18-5	13

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled Remove person to fresh air and keep comfortable for breathing. Immediately consult a doctor/medical service.

In Case of Skin Contact Wash immediately with lots of water or shower for 15 minutes. Do not apply neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/physician if you feel unwell.

In Case of Eye Contact Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to doctor/physician or ophthalmologist.

If Swallowed Rinse mouth with water. Immediately after ingestion: drink lots of water. Give milk to drink, do not induce vomiting. Do not give activated charcoal. Immediately consult a doctor/physician. Call a POISON CENTER. Take container/vomit to the hospital. Ingestion of large quantities: immediately take to hospital. Do not give chemical antidote. Gastric lavage is not recommended.

Most Important Symptoms/Effects Acute and Delayed

After Inhalation Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Exposure to high concentrations: Corrosion of the upper respiratory tract. Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of pneumonia. Risk of lung oedema.

After Skin Contact Caustic burns/corrosion of the skin.

After Eye Contact Corrosion of the eye tissue. Permanent eye damage.

After Ingestion Risk of aspiration pneumonia. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhea. Shock. Change in the haemogramme/blood composition. Change in urine composition. Decreased renal function.

Chronic Symptoms On continuous/repeated exposure or contact: may stain the skin. Slight irritation. Inflammation/damage of the eye tissue. Dry/sore throat. Possible inflammation of the respiratory tract. Discoloration of teeth. Gastrointestinal complaints.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Water spray, polyvalent foam, BC powder, and carbon dioxide.

Unsuitable Extinguishing Media Do not use high pressure water stream.

Special Hazards Arising from the Chemical

Flammable: Gas and vapor flammable with air within explosion limits. May be ignited by sparks. Gas and vapor explosive with air within explosion limits. On heating, release of corrosive/combustible gases/vapors (acetic acid vapors). Upon combustion: CO and CO₂ are formed. Violent to explosive reaction with many compounds to release highly flammable gases/vapors; strong oxidizers, bases, and metals.

Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and protective clothing. Gas-tight, corrosion-proof suit. Keep exposed containers cool with water spray. Dilute toxic gases with water spray. Use water moderately and if possible collect or contain.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources. Ventilate area. Stop engines and no smoking. No naked flames or sparks. Keep containers closed. Wash contaminated clothing before reuse.

Environmental Precautions

Keep upwind. Prevent entry to surface and ground waters.

Methods and Materials for Containment and Cleaning Up

Clean up spill with inert absorbent material. Neutralize with soda ash (sodium carbonate). Collect spillage. Store away from other materials. Ensure compliance with federal, state, and local regulations.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in area of use to prevent formation of vapor. Keep substance free from contamination. Use corrosion-proof equipment. Handle uncleaned empty containers as full ones. Do not discharge waste into drain. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

Conditions for Safe Storage Including any Incompatibilities

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from: oxidizers, metals, strong bases, direct sunlight, heat sources, and sources of ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters**

Acetic Acid (64-19-7)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	15 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	25 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain emergency eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures**Eye/Face Protection**

Avoid all unnecessary exposure.

Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material.

Skin Protection

Protective gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection

Wear appropriate mask.

Other Information

Do not eat, drink, or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**Physical State**

Liquid

Color

Colorless

Molecular Mass

Not determined

Odor

Vinegar odor.

Odor Threshold

1 ppm, 2.5 mg/m³

pH

4

Melting Point/Freezing Point

17°C/Not determined

Initial Boiling Point and Boiling Range

118°C

Flash Point

40°C

Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	4-19 vol%, 100-430 g/m ³
Vapor Pressure	16 hPa
Vapor Density	2.1
Relative Density	1.0
Solubility	Complete solubility in water. Complete solubility in ethanol. Complete solubility in ether. Complete solubility in acetone. Soluble in tetrachloromethane. Soluble in glycerol. Soluble in dimethyl sulfoxide.
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	485°C
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Upon heating: releases corrosive/combustible gases (acetic acid vapors). CO and CO ₂ are formed upon combustion. Violent to explosive reaction with strong oxidizers, bases, and some metals to release highly flammable gases/vapors (hydrogen.)
Chemical Stability	Stable under ordinary conditions of use and storage. Hygroscopic.
Possibility of Hazardous Reactions	Reacts violently with some bases with the evolution of heat.
Conditions to Avoid	Extremely high or low temperatures. Heat and sunlight can contribute to instability.
Incompatible Materials	May react violently with alkalis. May react with bases, copper, silver, mercury, magnesium, zinc and their alloys.
Hazardous Decomposition Products	Carbon dioxide and carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Not classified
Water (7732-18-5)	
LD50 oral rat	≥90000 mg/kg
Skin Corrosion/Irritation	Causes severe skin burns.
Serious Eye Damage/Irritation	Causes serious eye damage.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available.
Symptoms/Injuries After Inhalation	Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Corrosion of the upper respiratory tract. Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of pneumonia. Risk of lung oedema.
Symptoms/Injuries After Eye Contact	Caustic burns/corrosion of the skin.

Symptoms/Injuries After Ingestion

Risk of aspiration pneumonia. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhea. Shock. Change in the haemogramme/blood composition. Change in urine composition. Decreased renal function.

Chronic Symptoms

On continuous or repeated exposure: May stain the skin. Slight irritation. Inflammation/damage of the eye tissue. Dry/sore throat. Possible inflammation of the respiratory tract. Discoloration of the teeth. Gastrointestinal complaints.

Other Information

Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Water: Mild pollutant (surface water). Harmful to fish. Harmful to invertebrates (Daphnia). Not harmful to algae. pH shift. Inhibition of activated sludge.

Acetic Acid (64-19-7)	
LC50 fish 1	75 mg/l (96h; Lepomis macrochirus)
EC50 Daphnia 1	47 mg/l (24h; Daphnia magna)
EC50 other aquatic organisms 1	>5000 mg/l (5h; Activated sludge)
LC50 fish 2	94 mg/l (96h; Oryzias latipes)
EC50 Daphnia 2	95 mg/l (24h; Daphnia magna)
TLM fish 1	100 ppm (96h; Carassius auratus)
Threshold limit algae 1	90 mg/l (192h; Microcystis aeruginosa)
Threshold limit algae 2	4000 mg/l (192h; Scenedesmus quadricauda)

Persistence and Degradability

Readily biodegradable in water. Inherently biodegradable. Biodegradable in soil.

Acetic Acid (64-19-7)	
Biochemical oxygen demand (BOD)	0.6-0.74 g O ₂ /g substance
Chemical oxygen demand (COD)	1.03 g O ₂ /g substance
ThOD	1.07 g O ₂ /g substance
BOD (% of the ThOD)	0.56-0.69% ThOD

Bioaccumulative Potential

Log Pow: -0.31

Mobility in Soil

Surface tension: 0.028 N/m (20°C)

Other Adverse Effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations

Dispose of contents/containers in accordance with federal, state, and local regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together.

Other Information

Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number

1760

UN Shipping Name

Corrosive liquids, n.o.s.

Transport Hazard Class(es)

Not applicable

Packing Group

Not applicable

Environmental Hazards

Not applicable

Transport in Bulk

Not applicable

Other Precautions

Not applicable

SECTION 15: REGULATORY INFORMATION

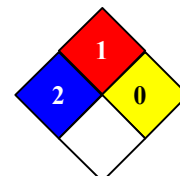
Acetic Acid (64-19-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable quantity)	5000 lb
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

SECTION 16: OTHER INFORMATION

Revision Date: 01/21/2015

NFPA Hazards

Health Hazard	2: Intense or prolonged exposure may cause incapacitation; residual injury may occur if not treated.
Fire Hazard	1: Must be preheated for ignition; flashpoint above 200°F (93°C).
Reactivity/Instability	0: Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	2: Temporary or minor injury may occur.
Flammability	1: Materials that must be preheated before ignition will occur. Includes liquids, solids and semisolids having a flashpoint above 200°F (93°C) (e.g., Canola oil).
Physical Hazard	0: Materials that are normally stable.
Personal Protection	D

A-16	
Health	2
Flammability	1
Physical Hazard	0
Personal Protection	D

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END OF SAFETY DATA SHEET