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14. TRANSPORT INFORMATION

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DOT Shipping Name: Sodium Hydroxide, solution  
DOT Number: UN1824

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15. REGULATORY INFORMATION

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The CAS numbers of all components of this solution are listed on the TSCA Inventory.

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16. OTHER INFORMATION

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NFPA Hazard Ratings:

Health:	3
Flammability:	0
Reactivity:	1
Special Hazards:	None known.

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The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, NCL of Wisconsin, Inc. makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgement in determining its appropriateness for a particular purpose. Accordingly, NCL of Wisconsin, Inc. will not be responsible for damages of any kind resulting from the use of or reliance upon such information.

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END OF MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET

NCL of Wisconsin, Inc.  
P.O. Box 8

Biramwood, WI 54414

Emergency Telephone No: 800-424-9300 (Chemtrec)

PRODUCT NAME: AMMONIA pH ADJUSTMENT BUFFER

NCL CATALOG NUMBER: A-41

Date of this revision: 10/30/2008

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1. CHEMICAL PRODUCT IDENTIFICATION

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Trade name: None.

Chemical Formula: Solution in water.

Formula CAS No: Not applicable.

Molecular Weight: Not applicable.

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2. COMPOSITION

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Component	CAS#	Approx %
Water	7732-18-5	60
Sodium Hydroxide	1310-73-2	40

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3. HAZARD IDENTIFICATION

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CAUSES BURNS on contact with any body tissue. HARMFUL IF INHALED OR SWALLOWED. Inhalation of mist can cause damage to respiratory system. Pneumonitis can result from severe exposures. Ingestion can cause severe burns, scarring of the throat, death. Do not get in eyes, on skin or on clothing. Minimal contact, as with all chemicals, is a good policy to follow. Remove and wash contaminated clothing before re-use. Routes of entry: Ingestion, inhalation, or skin contact. Carcinogenicity: This material is not listed (IARC, NTP, OSHA) as a cancer causing agent.

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4. FIRST AID MEASURES

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Ingestion: If swallowed, DO NOT INDUCE VOMITING! Give large quantities of water or milk of magnesia. Call a physician. Inhalation: Remove to fresh air. Give artificial respiration if breathing has stopped. Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. Skin: Immediately flush skin with plenty of water. Wash until the slippery feel of sodium hydroxide is gone. Get medical attention if irritation develops. Remove and wash contaminated clothing before re-use.

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#### 5. FIRE FIGHTING MEASURES

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Flash Point: Not Applicable.

Flammable Limits (LEL): Not Applicable.

Flammable Limits (UEL): Not Applicable.

Fire: Wear self-contained breathing apparatus and protective clothing.

Fire Extinguishing Media: Use any suitable means for surrounding materials.

Explosion Hazards: May react with metals to produce flammable hydrogen gas.

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#### 6. ACCIDENTAL RELEASE MEASURES

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Caution: Floors and other surfaces may become slippery. Evacuate area of non-essential personnel. Eliminate ignition sources. Neutralize to a pH of 6-9. Scoop up material and transfer to a plastic container and send to an RCRA-approved waste facility.

Ensure compliance with Federal, State, and local regulations.

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#### 7. HANDLING AND STORAGE

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Keep in a tightly closed container, stored in a cool, dry, ventilated area. Avoid breathing vapors. Avoid contact with eyes and skin.

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#### 8. EXPOSURE CONTROLS

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Airborne Exposure Limits:

None established for product.

For 100% Sodium Hydroxide (product contains 40%)

OSHA Permissible Exposure Limit (PEL): 2 mg/cu.m.

ACGIH Threshold Limit Value (TLV): 2 mg/cu.m.

Ventilation System: Material should be handled or transferred in a fume hood or with equivalent ventilation.

Personal Respirators (NIOSH Approved): If the TLV is exceeded a full facepiece chemical cartridge respirator may be worn, in general, up to the maximum use concentration specified by the respirator supplier, or up to 100 times the TLV, whichever is less.

Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection: Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Eye Protection: 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. Maintain eye-wash fountain and quick-drench facilities in work area.

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#### 9. PHYSICAL CHEMICAL PROPERTIES

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Appearance: Clear, colorless liquid.

Odor: None.

Solubility: Infinitely soluble in water, with great evolution of heat.

Boiling Point: Not Determined.

Melting Point: Not Determined.

Specific Gravity: 1.43

Vapor Density (Air=1): Not Determined.

Vapor Pressure (mm Hg): Not Determined.

Evaporation Rate: Not Determined.

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#### 10. STABILITY AND REACTIVITY

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Stability: Stable under ordinary conditions of use and storage. Store away from acids and metals.

Hazardous Decomposition Products: When heated to decomposition, can emit toxic gases and carbon dioxide.

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Contact with acids, flammable liquids, and organic halogen compounds, especially trichlorethylene, may cause fire or explosion. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, tin, and zinc causes formation of flammable hydrogen gas.

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#### 11. TOXICOLOGICAL INFORMATION

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No toxicity data for product.

For 100% Sodium Hydroxide (product contains 40%):

orl-rbt LDLo: 500 mg/kg.

Mutagenic effects cited in RTECS.

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#### 12. ECOLOGICAL INFORMATION

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None found.

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#### 13. DISPOSAL CONSIDERATIONS

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EPA Waste Number: None for product.

For Sodium Hydroxide: D002

Ensure compliance with Federal, State, and local regulations.