



# MATERIAL SAFETY DATA SHEET

SDNH42-xxx

## Section I. Product Identification

<b>Product Name:</b> 1000ppm Ammonium or Ammonia Standard solution (NH <sub>4</sub> <sup>+</sup> or NH <sub>3</sub> as N)	<b>Catalog No.</b> SD2002-MSDS	<b>Effective Date</b> 10/25/02
<b>Hazardous Shipment Labeling:</b>	<b>DOT</b> None	<b>IATA</b> None
<b>Prepared by</b> 	<b>Title</b> Quality Assurance Chemist	
<b>Approved by</b> 	<b>Title</b> Director Regulatory Matters	

## Section II - Hazard Ingredients/Identity Information

Hazardous Components Specific Chemical Identity; Common Name(s)	CAS No.	%	OSHA PEL	ACGIH TLV	LD <sub>50</sub>
Ammonium Chloride (NH <sub>4</sub> Cl)	12125-02-9	<0.4	None Listed	TWA 10 mg/m <sup>3</sup>	600 (ORL-DOG)
Deionized Water (H <sub>2</sub> O)	7732-18-5	99.6	None Listed	None Listed	190,000 (IPR-MUS)

## Section III - Physical/Chemical Characteristics

<b>Boiling Point 750mm Hg</b>	100°C	<b>Freezing Point</b>	-1°C
<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	1.01	<b>Vapor Pressure at</b>	NA
<b>pH at 25 °C</b>	(5.0 – 8.0)	<b>Solubility in water, % by wt at 25°C</b>	Miscible
<b>Volatiles, % by wt</b>	NA	<b>Evaporation Rate (Butyl Acetate = 1)</b>	NA
<b>Vapor Density (AIR = 1)</b> NA			
<b>Appearance and Odor</b> Clear, colorless, odorless solution			

## Section IV - Fire and Explosion Hazard Data

<b>Flash Point (Method Used)</b> Not flammable	<b>Flammable Limits</b>	<b>LEL</b> NA	<b>UEL</b> NA
<b>Extinguishing Media</b> Dry chemical, water, foam or CO <sub>2</sub>			
<b>Special Fire Fighting Procedures</b> Self-contained breathing apparatus should be worn.			
<b>Unusual Fire and Explosion Hazards</b> None			

## Section V - Reactivity Data

<b>Stability</b>		<b>Conditions to Avoid</b>
Unstable	Stable X	Heat or Flame
<b>Incompatibility (Materials to Avoid):</b> Oxidizers, BrF <sub>3</sub> , KClO <sub>3</sub> , Hypochlorite Bleaches, NH <sub>4</sub> NO <sub>3</sub>		
<b>Hazardous Decomposition or Byproducts</b> Emits toxic fumes when heated to decomposition		
<b>Hazardous Polymerization</b>		<b>Conditions to Avoid</b>
May Occur	Will Not Occur X	Heat



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## Section VI - Health Hazard Data

<b>Route(s) of Entry:</b>	<b>Inhalation?</b> No	<b>Skin?</b> No	<b>Ingestion?</b> Yes
<b>Health Hazards (<i>Acute and Chronic</i>)</b> Acute: Ingestion of large doses can cause nausea, vomiting, and acidosis. Chronic: difficulty breathing, weakness. Low hazard for skin and inhalation.			
<b>Carcinogenicity:</b> Not found on these lists.	<b>NTP?</b>	<b>IARC Monographs?</b>	<b>OSHA Regulated?</b>
<b>Signs and Symptoms of Exposure</b> Coughing, dyspnoea, irritation of upper respiratory tract and stomach.			
<b>Medical Conditions Generally Aggravated by Exposure</b> Respiratory and stomach ailments.			
<b>Emergency and First Aid Procedures</b> Skin and eyes - Wash off contact area with large amounts of water for 15 minutes. If ingested, induce vomiting. Consult a physician.			

## Section VII - Precautions for Safe Handling and Use

<b>Steps to Be Taken in Case Material is Released or Spilled</b>	Vacuum up and set aside for waste disposal.
<b>Waste Disposal Method</b>	Observe all Federal, State and local laws when disposing of this product.
<b>Precautions to Be taken in Handling and Storing</b> Keep well sealed and store away from heat or oxidizers. NFPA Rating: Scale (0-4); Health - 1, Fire - 0, Reactivity - 1, Specific - 0.	
<b>Other Precautions</b> SARA TITLE III: NH4Cl appears on EPA list 302.4 of 40CFR. Not found on Cal. Prop. 65 listing. Reported in EPA TSCA inventory.	

## Section VIII - Control Measures

<b>Respiratory Protection (<i>Specify Type</i>)</b>	None		
<b>Ventilation</b>	<b>Local Exhaust</b>	None	<b>Special</b> None
	<b>Mechanical (<i>General</i>)</b>	None	<b>Other</b> None
<b>Protective Gloves</b>	No	<b>Eye Protection</b>	Safety Glasses
<b>Other Protective Clothing or Equipment</b>	Lab coat		
<b>Work/Hygienic Practices</b> Emergency eyewash should be available. Wash hands after working with this product. No eating or drinking while working with this product.			