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MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: Ammonia Electrode Filling Solution	**Catalog No.** 951202	**Effective Date** 1/26/01
Hazardous Shipment Labeling: DOT: None	IATA: None	
Prepared By	**Title** Quality Assurance Chemist	
Approved By	**Title** Director Regulatory Matters	

II. HAZARDOUS INGREDIENTS (IDENTIFY INFORMATION)

Hazardous Components * Specific Chemical Identity: Common Name(s)	CAS NO.	%	OSHA PEL	ACGIH TLV	LD_{LO} mg/Kg
Ammonium Chloride (NH_4Cl)	12125-02-9	<1	10 mg/m^3	10 mg/m^3	600 (ORL-DOG)
***Deionized Water (H_2O)	7732-18-5	>99	None Listed	None Listed	629,000 (ORL-DOG)

III. PHYSICAL DATA

Boiling Point 750mm Hg	100°C	**Freezing Point**	0°C
Specific Gravity (H_2O=1)	1.0	**Vapor Pressure @ 25° C**	NA**
pH @25° C	5 - 8	**Solubility In Water, % by Wt @ 25° C**	Miscible
Volatiles % By Wt.	NA	**Evaporation Rate (BUTYL, ACETATE = 1)**	NA
Vapor Density (AIR = 1)	NA		
Appearance and Odor	Colorless, odorless liquid		

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method) Not flammable	**Autoignition Temperature** NA	
Flammable Limits In air, % by volume:	**Lower** NA	**Upper** NA
Extinguishing Media	Dry chemical, water, foam or CO_2	
Special Fire-Fighting Procedures	None	
Unusual Fire and Explosion Hazards	None	

*Chemicals which are not classified as hazardous per U.S. OSHA guidelines (29CFR Parts 1915.2 or 1916.2) or the Massachusetts Substance List (105CMR670.000 Appendix A) will not necessarily be listed on this form even though one or more may be a constituent of this product
** NA Not available/not applicable
*** Non-hazardous component

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated. Safe use of the materials is the responsibility of the user.

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V. REACTIVITY DATA

Stability:		**Conditions to Avoid**
Unstable	Stable X	None
Incompatibility (Material to avoid)	Oxidizers, hypochlorite bleaches	
Hazardous Decomposition Products	Ammonia gas when made basic.	
Hazardous Polymerization:		**Condition to Avoid**
May Occur	Will Not Occur X	None

VI. HEALTH HAZARD DATA

Route(s) Of Entry:	**Inhalation?**	**Skin?**	**Ingestion?**
	No	No	Yes
Health Hazards (acute and chronic)			
Ingestion of large doses may cause nausea, vomiting, acidosis. Because of low concentration of salt (less than 1%), this product is a low chronic or acute health risk.			
Carcinogenicity:	**NTP?**	**IARC Monographs?**	**OSHA Regulated?**
Not found on these lists.			
Signs and Symptoms of Exposure			
Cough, nausea, irritation of stomach			
Medical Conditions Generally Aggravated by Exposure	Stomach ailments if ingested		
Emergency And First Aid Procedures			
Wash affected area with water.			

VII. PRECAUTIONS (SAFE HANDLING AND USE)

Steps To be Taken In Case Material Is Released or Spilled
Dilute and wipe up spill area with water.

Waste Disposal Method
Observe all Federal, State and local laws before disposing of this product.

Precautions To Be Taken In Handling and Storing
Suitable for any general storage. Keep closure sealed to protect product integrity. NFPA Rating- Scale (0-4); Health -1, Fire -0, Reactivity -0, Specific - 0.

Other Precautions
SARA TITLE III: NH_4Cl is a CERCLA hazard and is subject to Sections 304, 311, and 312 of this law. Not found on CAL. Prop 65 listing. Components are listed in EPA TSCA inventory.

VIII. CONTROL MEASURES

Respiratory Protection (specify type)	None		
Ventilation	**Local Exhaust** None	**Special**	None
Ventilation	**Mechanical (General)** None	**Other**	None
Protective Gloves	None	**Eye Protection**	Safety glasses
Other Protective Clothing Or Equipment	None		
Work/Hygienic Practices	No eating or drinking while working with this product. Wash hands after using this product.		