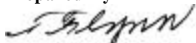
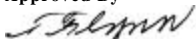


MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name:	Orion Nitrate Test Kit Ammonia Electrode Filling Solution	Catalog No.	951203	Effective Date	1/26/01
Hazardous Shipment Labeling:	DOT	IATA	Not restricted for transport (See ****)		
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 ₅₀ mg/Kg
Sodium Nitrate (NaNO ₃)	7631-99-4	4	None Listed	None Listed	2,680 (ORL-RBT)
Ammonium Chloride (NH ₄ Cl)	12125-02-09	1	10 mg/m ³	10 mg/m ³	1,650 (ORL-RAT)
***Deionized Water (H ₂ O)	7732-18-5	95	None Listed	None Listed	190,000 (IPR-MUS)

III. PHYSICAL DATA

Boiling Point 750mm Hg	100°C	Freezing Point	-1°C
Specific Gravity (H ₂ O=1)	1.03	Vapor Pressure @ 25° C	NA**
pH @ 25° C	NA	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 liquid, ammonia odor if made basic.		

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method)	NA	Autoignition Temperature	NA
Flammable Limits in air, % by volume:		Lower	Upper
		NA	NA
Extinguishing Media	Dry chemical, water, foam or CO ₂		
Special Fire-Fighting Procedures	None		
Unusual Fire and Explosion Hazards	Solution may have a slight oxidizing effect in fire situations.		

*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

**** Stronger solutions have been tested and were determined not to be oxidizers for DOT and IATA purposes.

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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MATERIAL SAFETY DATA SHEET

**PRODUCT NAME: Orion Nitrate Test Kit Ammonia
Electrode Filling Solution**

Catalog No.: 951203

V. REACTIVITY DATA

Stability:			Conditions to Avoid
Unstable	Stable	X	None Known
Incompatibility (Materials to avoid)			
Separate from materials which are readily oxidized or combustible			
Hazardous Decomposition Products			
Oxides of nitrogen upon thermal decomposition. Ammonia gas when made basic.			
Hazardous Polymerization:		Condition to Avoid	
May Occur	Will Not Occur	X	None listed

VI. HEALTH HAZARD DATA

Route(s) Of Entry:	Inhalation?	Skin?	Ingestion?
	No	Irritant	Yes
Health Hazards (acute and chronic)			
Eyes: conjunctivitis. Skin: dermatitis. Ingestion: gastritis, methemoglobinemia. Inhalation: pulmonary edema (if large amounts made basic).			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
Not found on these lists.			
Signs and Symptoms of Exposure			
Eyes: conjunctivitis. Skin: dermatitis. Lungs: coughing. Ingestion: stomach ache.			
Medical Conditions Generally Aggravated by Exposure		Mouth, throat, and lung irritation.	
Emergency And First Aid Procedures			
Skin: wash off with soap and water. Eyes: irrigate with water. Ingestion: give large amounts of water, induce vomiting, call physician.			

VII. PRECAUTIONS (SAFE HANDLING AND USE)

Steps To be Taken In Case Material Is Released or Spilled
While wearing gloves and safety glasses, dilute spill with water, vacuum up and set aside for waste disposal.
Waste Disposal Method
Consult with Federal, State and local laws for proper disposal of this solution.
Precautions To Be Taken In Handling and Storing
Ammonium chloride is a <u>CERCLA</u> hazard and is subject to reporting under Section 304 of <u>SARA TITLE III</u> . <u>NFPA Rating:</u> Scale (0-4); Health -2, Fire -1, Reactivity -0, Specific - None.
Other Precautions
This product is not affected by <u>CAL Prop 65</u> . Components are reported in EPA TSCA inventory.

VIII. CONTROL MEASURES

Respiratory Protection (specify type)	
None	
Ventilation	Local Exhaust
Yes	None
Ventilation	Mechanical (General)
	None
Protective Gloves	Eye Protection
Yes	Safety Glasses
Other Protective Clothing Or Equipment	
None necessary	
Work/Hygienic Practices	
Wash hands thoroughly after handling.	