



MATERIAL SAFETY DATA SHEET

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Section I. PRODUCT IDENTIFICATION

Product Name: Solution, pH Electrolyte, 3.3 M KCl saturated with AgCl	Catalog No. R-PHELECTROLYTE4	Effective Date: 03 July, 2008
Hazardous Shipment Labeling: DOT: None	IATA: None	
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Section II. HAZARDOUS INGREDIENTS/Identity Information

Hazardous Components* Specific Chemical Identity; Common Name(s)	CAS No.	%	OSHA PEL	ACGIH TLV	LD ₅₀ mg/Kg
Potassium Chloride (KCl)**	7447-40-7	<30	None Listed	None Listed	2,600 (ORL-RAT)
Silver Nitrate (AgNO ₃) Note 1: (TWA), silver, metal & soluble compounds, as Ag Note 2: (TWA), soluble silver compounds, as Ag	7761-88-8	<0.09	0.01 mg/m ³ See Note 1	0.01 mg/m ³ See Note 2	1,173 (ORL-RAT)
Deionized Water (H ₂ O)**	7732-18-5	>70	None Listed	None Listed	NA

Section III. PHYSICAL/CHEMICAL DATA AND CHARACTERISTICS

Boiling Point at 760 mmHg	NA	Freezing Point	NA
Specific Gravity (H₂O = 1)	NA	Vapor Pressure at 25°C	NA
pH at 25°C	NA	Solubility in water, % by wt	Miscible
Volatiles, % by wt	NA	Evaporation Rate (B A = 1)	NA
Vapor Density (AIR = 1)	NA		
Appearance and Odor:	Clear, colorless, odorless liquid with a white precipitate		

Section IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): NA	Auto-ignition Temperature: NA	Flammable Limits In air, % by volume:	Lower NA	Upper NA
Extinguishing Media: Dry chemical, water, foam, or CO ₂ Use media appropriate to surrounding fire conditions				
Special Fire Fighting Procedures: NONE, this solution is non-flammable. As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.				
Unusual Fire and Explosion Hazards: None				

Section V. REACTIVITY DATA

Stability: Unstable Stable X	Conditions to Avoid: Water incompatibles, heat, or incompatibles
Incompatibility (Materials to Avoid): Water incompatibles and strong acids.	
Hazardous Decomposition or Byproducts: When heated to decomposition it may emit oxides of the metals or the halogen, may also emit free or ionic halogen.	
Hazardous Polymerization: May Occur Will Not Occur X	Conditions to Avoid: Extreme temperatures

*Chemicals that are not classified as hazardous by U.S. OSHA guidelines (29 CFR Parts 1915.2 or 1916.2) will not necessarily be listed herein even though one or more may be in this product.

** Non-hazardous component

NA = Not available/Not applicable



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Section VI. HEALTH HAZARD DATA – Given for concentrated HCl solutions – This solution may have reduced hazards

Route(s) of Entry: Inhalation? YES	Skin? YES	Ingestion? YES
Health Hazards (Acute and Chronic): Irritant. Can cause irritation, redness or burning of skin, mucosal membranes, eyes, respiratory tract, or gastrointestinal tract. DO NOT GET IN AN OPEN CUT!		
Carcinogenicity: NTP? OSHA Regulated? IARC Monographs? Not found on these lists.		
Signs and Symptoms of Exposure: Can cause burns, irritation, redness, or pain in exposed area.		
Medical Conditions Generally Aggravated by Exposure: Persons with pre-existing skin disorders, eye problems, kidney problems, or impaired respiratory function may be more susceptible to the effects of this substance.		
Emergency and First Aid Procedures: Eye Contact: Remove contact lenses if present. Immediately flush eyes with copious amounts of water, separate eyelid from eye. Get medical attention. Skin Contact: Immediately flush skin with plenty and copious amounts of water for 15 minutes. Remove contaminated clothing and shoes, clean before reuse. Get medical attention. Ingestion: DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention. Inhalation: Remove to fresh air, if not breathing give artificial respiration, if breathing is difficult give oxygen. Get medical attention.		

Section VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled: Clean up then dispose of properly according to local laws. Observe all Federal, State and Local laws when disposing of this product.
Waste Disposal Method: Observe all Federal, State and Local laws when disposing of this product.
Precautions to Be taken in Handling and Storing: Avoid contact with eyes. Wash hands thoroughly after use. NFPA Rating: Scale (0-4): Health – 3, Fire – 0, Reactivity – 1, Specific – None.
Other Precautions: The solids used to make this substance are found on TSCA list and SARA 311/312 listed as: Acute; Yes, Chronic: Yes, Fire: no, Pressure: no, Reactivity: no.

Section VIII. CONTROL MEASURES

Respiratory Protection (Specify Type) Wear appropriate respirator if ventilation is inadequate		
Ventilation	Local Exhaust: Recommended	Special: NONE
Ventilation	Mechanical (General): NONE	Other: NONE
Protective Gloves: Disposable latex gloves or similar	Eye Protection: Safety Glasses with top and side shields	
Other Protective Clothing or Equipment: Eye wash station should be available. Wear protective garments if sensitive skin.		
Work/Hygienic Practices: No eating or drinking in work area. Wash hands after working with this product.		

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

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