



## MATERIAL SAFETY DATA SHEET

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#### Section I. PRODUCT IDENTIFICATION

<b>Product Name:</b> Solution, Calcium Standard, 0.1 M as Ca, 1,000 ppm as Ca	<b>Catalog No.</b> SD0CA1-xx, SD0CA2-xx, SD2007-xx, or SD2008-xx	<b>Effective Date:</b> 09 May, 2008
<b>Hazardous Shipment Labeling:</b> DOT: None	<b>IATA:</b> None	
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<b>Approved by:</b> George C. Barone III, Ph.D.	<b>Title:</b> Director Regulatory Compliance	

#### Section II. HAZARDOUS INGREDIENTS/Identity Information

Hazardous Components* Specific Chemical Identity; Common Name(s)	CAS No.	%	OSHA PEL	ACGIH TLV	LD <sub>50</sub> mg/Kg
Calcium Chloride (CaCl <sub>2</sub> )	10043-52-4	<2	None Listed	None Listed	1,000 (ORL-RAT)
Deionized Water (H <sub>2</sub> O)**	7732-18-5	>98	None Listed	None Listed	NA

#### Section III. PHYSICAL/CHEMICAL DATA AND CHARACTERISTICS

<b>Boiling Point at 760 mmHg</b>	NA	<b>Freezing Point</b>	NA
<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	NA	<b>Vapor Pressure at 25°C</b>	NA
<b>pH at 25°C</b>	NA	<b>Solubility in water, % by wt</b>	Miscible
<b>Volatiles, % by wt</b>	NA	<b>Evaporation Rate (B A = 1)</b>	0.76
<b>Vapor Density (AIR = 1)</b>	NA		
<b>Appearance and Odor:</b>	Clear, colorless, odorless liquid		

#### Section IV. FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used):</b> NA	<b>Auto-ignition Temperature:</b> NA	<b>Flammable Limits</b> In air, % by volume:	<b>Lower</b> NA	<b>Upper</b> NA
<b>Extinguishing Media:</b> Dry chemical, water, foam, or CO <sub>2</sub> Use media appropriate to surrounding fire conditions				
<b>Special Fire Fighting Procedures</b> NONE, this solution is non-flammable. As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.				
<b>Unusual Fire and Explosion Hazards:</b> NONE. This product will not burn or explode.				

#### Section V. REACTIVITY DATA

<b>Stability:</b> Unstable    Stable X	<b>Conditions to Avoid:</b> Water incompatibles or extreme Temperatures
<b>Incompatibility (Materials to Avoid):</b> Water incompatibles, Methyl vinyl ether, zinc, Bromine Trifluoride, mixtures of lime and boric acid, barium chloride, sodium metals, or strong mineral acids and bases. Reacts with acids to form hydrogen chloride.	
<b>Hazardous Decomposition or Byproducts:</b> Thermal decomposition can produce halogenated compounds and Hydrogen chloride.	
<b>Hazardous Polymerization:</b> May Occur    Will Not Occur X <b>Conditions to Avoid:</b> 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

<b>Route(s) of Entry:</b> <b>Inhalation?</b> YES <b>Skin?</b> YES <b>Ingestion?</b> YES
<b>Health Hazards (Acute and Chronic):</b> Contact may cause skin, eye, respiratory tract, gastrointestinal tract, or mucosal membrane irritation.
<b>Carcinogenicity:</b> <b>NTP?</b> <b>IARC Monographs?</b> <b>OSHA Regulated?</b> Not found on these lists.
<b>Signs and Symptoms of Exposure:</b> May cause irritation, redness, or pain in exposed area.
<b>Medical Conditions Generally Aggravated by Exposure:</b> No information found.
<b>Emergency and First Aid Procedures:</b> <b>Eye Contact:</b> Remove contact lenses if present. Immediately flush eyes with copious amounts of water, separate eyelid from eye. Get medical attention. <b>Skin Contact:</b> Wash effected area with soap and copious amounts of water. Get medical attention. <b>Ingestion:</b> Give 1 to 2 glasses of water. Do not induce vomiting. Get medical attention. <b>Inhalation:</b> 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

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

## Section VIII. CONTROL MEASURES

<b>Respiratory Protection (Specify Type) Wear appropriate respirator if ventilation is inadequate</b>		
<b>Ventilation</b>	<b>Local Exhaust:</b> NONE	<b>Special:</b> NONE
<b>Ventilation</b>	<b>Mechanical (General):</b> NONE	<b>Other:</b> NONE
<b>Protective Gloves:</b> Disposable latex gloves or similar	<b>Eye Protection:</b> Safety Glasses with top and side shields	
<b>Other Protective Clothing or Equipment:</b> Eye wash station should be available. Wear protective garments if sensitive skin.		
<b>Work/Hygienic Practices:</b> 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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