SDS No.:	SS0229	SAFETY DATA SHEE	T GENERAL STORAGE CODE GREEN
Section 1	Identification	0/1 211 D/11/01/22	Page E1 of E2
	/ating Science [®] by Ald utting edge science for the class		
Product	SODIUM ACETATE, 0.1 MOLAR SOLU	JTION	
Synonyms	Sodium Acetate, Water Solution		
Section 2	Hazards identification		
to the Glob Chemicals. Signal word Pictograms Target orga GHS Classi GHS Label	Ince or mixture has not been classified ally Harmonized System (GHS) of Class d: None required :: No symbol required ns: None known fication: None required information: Hazard statement: None re ary statement: None required	sification and Labeling of	Supplemental information: Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients				
Chemical Name		CAS #	%	EINECS	
Water Sodium acetate		7732-18-5 127-09-3	99.18% 0.82%	231-791-2 204-823-8	
Section 4	First aid measures				

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection				
Evanouum Limiter	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Limits:	Sodium acetate	Not established	Not established	Not established	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.							
Section 9	Physical and chemical pro	perties					
Appearance: Clear, colorless liquid. Evaporation rate (Water = 1): <1					: Data not available ire: Data not available. ble. re		
Section 10	Stability and reactivity						
	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures. Hazardous polymerization: Will not occur.						
Incompatible mater	ials: None listed.						
Hazardous decomp	osition products: Carbon and	sodium oxides.					
Section 11	Toxicological information						
Skin corrosion/irritation: Skin-rabbit - 500 mg/24 hours - irritating [Sodium acetate, anhydrous] Serious eye damage/irritation: Eyes-rabbit - 500 mg - irritating [Sodium acetate, anhydrous] Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Stottor in healton: Inhalation to respiratory tract. Ingestion: Ingestion may cause abdominal pain and vomiting. Skin: Contact with skin may cause irritation. Eyes: Contact with skin may cause irritation. Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards.							
	ion: RTECS #: AJ4300010 [Sc	,	,1				
Section 12 Ecological information							
Toxicity to fish: Brachydanio rerio (fish, fresh water), LC0: ≥100 mg/L/96 hours [Sodium acetate, anhydrous] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50: >1000 mg/L/48 hours [Sodium acetate, anhydrous] Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 Disposal considerations							
	delines are intended for the o						
Section 14	different. Dispose of in acco Transport information						
UN/NA number: Hazard class: No	Section 14 Transport information UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No						arine pollutant: No
Section 15	Regulatory information						
	d to be listed if the CAS number for t	•					
Compone Sodium acetate	nt	Listed	CERLCA (RQ) Not listed	RCRA code Not listed	DSL Listed	NDSL Not listed	CA Prop 65 This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
The information contain dent determinations of s	ed herein is furnished without warrar	ation from all sour	ces to assure proper use	of these materials and	the safety and he	ealth of employees	ered by them and must make indepen- s. NTP: National Toxicology Program, occure, PE: Papagated Exposure

Form 06/2015

Section 1

SAFETY DATA SHEET

GENERAL STORAGE CODE GREEN

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Innovating Science[®] by Aldon Corporation

Identification

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

SODIUM CHLORIDE, 0.1 MOLAR SOLUTION Product Synonyms Sodium Chloride, Water Solution Section 2 Hazards identification This substance or mixture has not been classified as hazardous according Supplementary information: to the Globally Harmonized System (GHS) of Classification and Labeling of Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Chemicals. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell. Signal word: Not classified Pictograms: Not classified Target organs: None known GHS Classification: Not classified GHS Label information: Hazard statement(s): Not classified Precautionary statement(s): Not classified

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients				
Chemical Name		CAS #	%	EINECS	
Water Sodium chloride		7732-18-5 7647-14-5	99.42% 0.58%	231-791-2 231-598-3	
Section 4	First aid measures				

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale mist/vapours/spray. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Store away from acids.

Section 8	Exposure controls / personal protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
	Sodium chloride	None established	None established	None established	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.	approved respirator.						
Section 9	Physical and chemical pr	operties					
	ata not available. ble. : Approximately 0°C (32°F) (water) ximately 100°C (212°F) (water)	Flammability (Explosion lime Vapor pressur Vapor density Relative density	ate (Water = 1): <1 solid/gas): Data not its: Lower / Upper: re (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available er)	Auto-ignit Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re
Section 10	Stability and reactivity						
Conditions to avoid Incompatible mater	Chemical stability: Stability: Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures which cause evaporation. Incompatible materials: Strong acids. Hazardous decomposition products: Electrolysis can produce chlorine gas.						
Section 11	Toxicological information						
Skin corrosion/irrita Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No componen Reproductive toxic STOT-single expose STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: Inhalation Ingestion: Ingestion Skin: Contact may of Eyes: Contact may of	Acute toxicity: Oral-rat LD50: 3000 mg/kg [Sodium chloride] Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSH4: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Potential health effects: Inhalation of dust leaves salty taste with mild irritation to mucous membrane in nose and throat. Ingestion: Ingestion of large amounts (more than 0.1 pound) may cause vomiting. Skin: Contact may cause very slight irritation. Styse: Contact may cause very slight irritation. Signs and symptoms of exposure: Gros overexposure over a long period of time, results in dehydration.<						
Section 12 Ecological information							
Section 12 Ecological mormation Toxicity to fish: Lepomis macrochirus (fish, freshwater) LC50: 9,675 mg/l/96 hours [Sodium chloride] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea) EC50: 6,175 mg/l/16 hours [Sodium chloride] Toxicity to algae: Anabaena variabilis (Algae) LC50: 23,565 mg/l/4 day [Sodium chloride] Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and VPVB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.							
Section 13	Disposal considerations						
These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.Section 14Transport information							
UN/NA number:		ping name: N	•				
Hazard class: No		ing group: N		Reportable Qua	antity: No	Ма	arine pollutant: No
Exceptions: Not		ERG Guide #	Not applicable				
Section 15	Regulatory information d to be listed if the CAS number for	the anhydrous form	is on the Inventory list				
		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sodium chloride		Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
The information contain	ed herein is furnished without warra	nty of any kind. Em	ployers should use this i	nformation only as a su	pplement to othe	er information gath	ered by them and must make indepen-

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

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Section 1	
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Identification

Innovating Science[®] by Aldon Corporation

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency

Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product S	ODIUM CARBONATE, 0.1 MOLAR (0.2N) SOLUTION		
	Sodium Carbonate, Water Solution			
Section 2	Hazards identification			
Signal word: N Pictograms: N Target organs: GHS Classific: Eye irritation (C GHS Label info H320: Causes of H320: Causes of Hazards not of Health hazards	WARNING lo symbol required : None known ation: :ategory 2B) prmation: Hazard statement:		P264: Wash P305+P351+ Remove con	Iry statement: hands thoroughly after handling. -P338: IF IN EYES: Rinse cautiously with water for several minutes. tact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Section 3	Composition / information on	-		
Chemical Name Water		CAS # 7732-18-5	% 98.94%	EINECS 231-791-2
Sodium carbon	ate	497-19-8	1.06%	207-838-8

Section 4 First aid measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Linits.	Sodium carbonate	None established.	None established.	None established.	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirat	01.				
Section 9	Physical and chemical pr	operties			
Appearance: Clear, colorless liquid. Evaporation rate (Water = 1): <1 Partition coefficient: Data not available Odor: No odor. Flammability (solid/gas): Data not available. Partition coefficient: Data not available Odor threshold: Data not available. Explosion limits: Lower / Upper: Data not available. Partition coefficient: Data not available pH: Data not available. Explosion limits: Lower / Upper: Data not available Decomposition temperature: Data not available pH: Data not available. Vapor pressure (mm Hg): 14 (water) Viscosity: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Vapor density (Air = 1): 0.7 (water) Molecular formula: Mixture Boiling point: Approximately 100°C (212°F) (water) Relative density (Specific gravity): Approximately 1.0 (water) Molecular weight: Mixture Flash point: Data not available Solubility(ies): Complete in water. Molecular weight: Mixture					
Section 10	Stability and reactivity				
Chemical stabilitions to av	-	Hazardous polymerization: Will not occur. groscopic material, avoid moisture.			
Incompatibilities be produced.	s with other materials: Acids caus	se decompostion liberating gaseous carbon dioxide. Whe	en mixed with lime dust and water, corrosive and caustic soda m		
Hazardous deco	mposition products: Carbon dio:	xide.			
Section 11	Toxicological information				
 Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available. STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed. Skin: May be harmful if absorbed through skin. May cause skin irritation. Eyes: May cause eye irritation. Signs and symptoms of exposure: Burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Additional information: RTECS #: VZ4050000 [Sodium carbonate] 					
Section 12	Ecological information				
Toxicity to fish: LC50 - Lepomis macrochirus (Bluegill) - 300 mg/l - 96 h [Sodium carbonate] Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 265 mg/l - 48 h [Sodium carbonate] Toxicity to algae: No data available Persistence and degradability: No data available Bioaccumulative potential: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.					
Section 13	Disposal considerations				
			ulations may apply to empty container. State and/or local or contract with a licensed chemical disposal agency.		
Section 14	Transport information				
UN/NA number Hazard class:	•••	ping name: Not Regulated (ing group: Not applicable Reportable Q	uantity: No Marine pollutant: No		

Exceptions: Not applicable 2016 ERG Guide # Not applicable Section 15 **Regulatory information** A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. DSL NDSL CERLCA (RQ) RCRA code CA Prop 65 Component TSCA This product does not contain Sodium carbonate Listed Not listed Not listed Not listed Not listed any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Section 1

SAFETY DATA SHEET

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Identification

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Innovating Science[®] by Aldon Corporation

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

For laboratory and industrial use only. Not for drug, food or household use.

	5 5 (((((
Product	SODIUM FERROCYANIDE, 0.1 MOLAR SOLUTION	
Synonyms	Sodium Ferrocyanide, Water Solution	
Section 2	Hazards identification	
This substa to the Glob Chemicals. Signal word Pictograms Target orga GHS Classi GHS Label	nce or mixture has not been classified as hazardous according illy Harmonized System (GHS) of Classification and Labeling of : None required : No symbol required ns: None known fication: None required nformation: Hazard statement: None required ry statement: None required	Supplemental information: Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Contact with acids liberates very toxic gas. Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Sodium ferrocyanide		7732-18-5 13601-19-9	95.16% 4.84%	231-791-2 237-081-9		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE MILD EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE MILD SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Sodium ferrocyanide	None established.	None established.	None established.			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and che	mical properties					
Appearance: Liqu Odor: No odor. Odor threshold: 1 pH: Data not avail Melting / Freezing poi	uid. Pale yellow. Data not available. able. nt: Approximately 0°C (32°F) roximately 100°C (212°F) ((water) (water	te (Water = 1): <1 solid/gas): Data not ts: Lower / Upper: e (mm Hg): 14 (water (Air = 1): 0.7 (water (Specific gravity): App Complete in water.	Data not available er)	Auto-ignit Decompos Viscosity: Molecular		: Data not available Ire: Data not available. ble. re
Section 10	Stability and reac	tivity					
Chemical stability Conditions to avo		Hazardo ures which cause evaporat	us polymerization: on. Store away from				
Incompatibilities v	with other materials: S	trong oxidizers, ammonia,	chromic acid and stro	ong acids.			
Hazardous decom	position products: Nit	trogen oxides, carbon oxide	s, and hydrogen cya	nide.			
Section 11	Toxicological info	rmation					
Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compor Reproductive toxi STOT-single expo STOT-repeated expo STOT-repeated expo STOT-repeated expo Aspiration hazard Potential health e Inhalation: May cau Ingestion: Ingestion Skin: May cause in Eyes: May cause is Signs and symptt mucous membrane	nt of this product present ent of this product present icity: Data not available soure: Data not available (posure: Data not available ffects: se irritation to the respirato n may cause gastrointes rritation. orms of exposure: Ferror es is possible. Exercise	t at levels greater than or e nt at levels greater than or e ent at levels greater than or e able bry tract. Ferrocyanides have stinal upset. bcyanide salts are rapidly e appropriate procedures to f	equal to 0.1% is iden equal to 0.1% is iden a low order of toxicity. xcreted in the urine,	tified as probable, po ntified as a carcinoge However, certain proc apparently without me	ssible or confi n or potential esses may rele	rmed human card carcinogen by OS	
Section 12	ation: RTECS #: Data Ecological inform						
Toxicity to algae: Persistence and d Mobility in soil: N	a and other aquatic inv No data available legradability: No data a lo data available		lative potential: No PvB assessment: N	o data available	r disposal.		
Section 13	Disposal conside	rations					
		of in accordance with all					container. State and/or local emical disposal agency.
UN/NA number: Hazard class: N Exceptions: N	Not applicable Not applicable	Shipping name: N Packing group: No 2016 ERG Guide #	ot applicable	Reportable Qua	antity: No	Ma	arine pollutant: No
Section 15	Regulatory inform						
		umber for the anhydrous form	is on the Inventory list.				
Compo	nent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
							•
Sodium ferrocyanic	le	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

CORROSIVE STORAGE CODE WHITE

Section 1	Identification			Page E1 of E2
	tting edge science for the classroom"	221 Rochester Stree Avon, NY 14414-94 (585) 226-6177	t	CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	SODIUM HYDROXIDE, 0.1 MOLAR (0.1N) SOLUTION			
Synonyms	Sodium Hydroxide, Water Solution (0.1M)			
Section 2	Hazards identification			
Signal word	: WARNING		Precautionary statement:	

Pictograms: None required Target organs: Respiratory tract, gastrointestinal tract, eyes, skin.

GHS Classification:

Skin irritation (Category 3) Eye Irritation (Category 2B)

GHS Label information: Hazard statement:

H316: Causes mild skin irritation. H320: Causes eye irritation.

P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients **Chemical Name** CAS # % EINECS 7732-18-5 99.6% 231-791-2 Water Sodium hydroxide 1310-73-2 0.4% 215-185-5 Section 4 First aid measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES MILD IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Dry chemical, water spray, alcohol foam. Can react with carbon dioxide to form sodium carbonate.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume. Contact with metals can generate hydrogen gas.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Sodium hydroxide	STEL: C 2 mg/m ³	TWA: 2 mg/m ³	STEL: C 2 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Appearance: Clea								
Appearance: Clea	Physical and chemical	properties						
Odor: No odor. Odor threshold: N pH: Data not availa Melting / Freezing	able. point: ~ 0°C (~ 32°F) [water] 00°C (212°F) [water]	Explosion limits: Vapor pressure (Vapor density (A	id/gas): Not applica Lower / Upper: No mm Hg): 14 [water] ir = 1): 0.7 [water] (Specific gravity): 1	ot applicable	Auto-igniti Decompos Viscosity: Molecular	on temperature	e	
Section 10	ion 10 Stability and reactivity							
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Can react with carbon dioxide to form sodium carbonate. Will not occur.								
Incompatible mate	erials: Metals, acids, organic o	compounds, organic nit	ro compounds.					
Hazardous decom	position products: Sodium o	oxide. Reacts with met	als to form flammable	e and explosive hy	drogen gas.			
Section 11	Toxicological information	on						
Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compore Reproductive toxi STOT-single expo STOT-repeated expo STOT-repeated expo Aspiration hazard Potential health e Inhalation: No data Ingestion: No data Skin: Causes sirita Eyes: Causes slig Signs and sympto Specific data is not	nt of this product present at levent of the product present present of the product present prese	vels greater than or eq evels greater than or e ed contact. of our knowledge the te procedures to minim	ual to 0.1% is identifi qual to 0.1% is identi chemical, physical an	ed as probable, po fied as a carcinoge d toxicological pro	ssible or confir n or potential d	med human caro carcinogen by OS	SHA.	
Section 12	Ecological information							
Section 12 Toxicity to fish: L Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effe	C50 - Gambusia affinis (Mosqu a and other aquatic invertebr No data available legradability: No data availabl lo data available ects: An environmental hazard	eates: Immobilization E Bioaccumula PBT and vPv cannot be excluded in	C50 - Daphnia - 40.3 tive potential: No d B assessment: No d	38 mg/l - 48 h [Sod ata available data available				
Section 12 Toxicity to fish: L Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effet Section 13	C50 - Gambusia affinis (Mosqu a and other aquatic invertebr No data available legradability: No data availabl lo data available ects: An environmental hazard Disposal consideration	rates: Immobilization E le Bioaccumula PBT and vPv I cannot be excluded ir s	C50 - Daphnia - 40.3 tive potential: No d B assessment: No o h the event of unprofe	38 mg/l - 48 h [Sod ata available data available essional handling o	r disposal.			
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Section 12 Toxicity to fish: L Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: N	C50 - Gambusia affinis (Mosqu a and other aquatic invertebr No data available legradability: No data available lo data available ects: An environmental hazard Disposal consideration uidelines are intended for th be different. Dispose of in ar Transport information Not applicable Sh	rates: Immobilization E Bioaccumula PBT and vPv I cannot be excluded ir s e disposal of catalog ccordance with all lo ipping name: Not cking group: Not 16 ERG Guide # N	C50 - Daphnia - 40.3 tive potential: No d B assessment: No d the event of unprofe g-size quantities on cal, state and fede Regulated applicable	³⁸ mg/l - 48 h [Sod ata available data available essional handling o ly. Federal regul ral regulations or	r disposal. ations may a contract with	pply to empty c a licensed che	emical disposal agency.	
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Section 12 Toxicity to fish: L Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: N Exceptions: Ne Section 15 A chemical is consider	C50 - Gambusia affinis (Mosqu a and other aquatic invertebr No data available legradability: No data available lo data available ects: An environmental hazard Disposal consideration uidelines are intended for th be different. Dispose of in a Transport information Not applicable Sh Not applicable Par ot applicable 20' Regulatory information red to be listed if the CAS number finent	rates: Immobilization E Bioaccumula PBT and vPv I cannot be excluded in s e disposal of cataloo ccordance with all lo ipping name: Not cking group: Not 16 ERG Guide # N or the anhydrous form is TSCA	C50 - Daphnia - 40.3 tive potential: No d B assessment: No o n the event of unprofe g-size quantities on cal, state and fede Regulated applicable ot applicable on the Inventory list.	8 mg/l - 48 h [Sod ata available data available essional handling o ly. Federal regul ral regulations or Reportable Qua	ations may a contract with	pply to empty c a licensed che Ma	emical disposal agency. arine pollutant: No	

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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Section 1

Identification

CHEMTREC 24 Hour Emergency Phone Number (800) 424 9300

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

SODIUM IODIDE, 0.1 MOLAR SOLUTION Product Synonyms Sodium Iodide, Aqueous Solution Section 2 Hazards identification This substance or mixture has not been classified as hazardous according Precautionary statement: to the Globally Harmonized System (GHS) of Classification and Labeling of P264: Wash hands thoroughly after handling. Chemicals. P332+P313: If skin irritation occurs: Get medical attention. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Signal word: WARNING Remove contact lenses, if present and easy to do. Continue rinsing. Pictograms: Not classified P337+P313: If eye irritation persists: Get medical attention. Target organs: None known **GHS Classification:** Skin irritation (Category 3) Eye irritation (Category 2B) GHS Label information: Hazard statement: H316: Causes mild skin irritation. H320: Causes eye irritation.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Sodium iodide		7732-18-5 7681-82-5	98.5% 1.5%	231-791-2 231-679-3		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Particles not otherwise classified	Not established	TWA: 15 mg/m ³ total dust	Not established			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9							
	Physical and chemical pr	operties					
Odor: No odor. Odor threshold: E pH: Data not availa Melting / Freezing poin	able. nt: Approximately 0°C (32°F) (water) roximately 100°C (212°F) (water)	Flammability (Explosion limi Vapor pressur Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: 1 re (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available r)	Auto-ignit Decompos Viscosity: Molecular		: Data not available Ire: Data not available. ble. re
Section 10	Stability and reactivity						
Chemical stability Conditions to avoi	: Stable id: Excessive temperatures whic		us polymerization: tion. Protect from light				
Incompatible mate	erials: Acids, strong oxidizers, m	etallic salts, chlora	al hydrate, perchloric	acid, bromine trifluorio	de.		
Hazardous decom	position products: lodine, sod	um oxide. In pres	sence of acids can libe	erate hydrogen iodide	. In presence	of oxidizers can	liberate iodine.
Section 11	Toxicological information						
Carcinogenity: Da NTP: No componer IARC: No compone OSHA: No compone Reproductive toxi STOT-single expo STOT-repeated ex	nt of this product present at levels ent of this product present at level ent of this product present at leve city: Data not available sure: Data not available posure: Data not available : Data not available	s greater than or	equal to 0.1% is ident	ified as probable, pos	sible or confi	med human card	0,
Ingestion: Ingestio Skin: Causes redn Eyes: Causes redr Signs and sympto various skin reactio	on may cause cough, sore throat n causes diarrhea, nausea, vomi ess and irritation.	ting. r cause effects on Exercise appropria		•		otoms that may in	nclude airway obstruction and
Ingestion: Ingestion Skin: Causes redn Eyes: Causes redr Signs and sympto various skin reactio Additional informa Section 12	on may cause cough, sore throad n causes diarrhea, nausea, vomi ess and irritation. ness and irritation. oms of exposure: Ingestion may ns or even anaphylactic shock. ation: RTECS #: WB6475000 [Ecological information	ting. r cause effects on Exercise appropria		•		otoms that may in	nclude airway obstruction and
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Ingestion: Ingestion Skin: Causes redn Eyes: Causes redn Signs and sympto various skin reactio Additional informa Section 12 Toxicity to fish: D Toxicity to fish: D Toxicity to daphnia Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13	on may cause cough, sore throad n causes diarrhea, nausea, vomi ess and irritation. ms of exposure: Ingestion may ons or even anaphylactic shock. ation: RTECS #: WB6475000 [Ecological information ata not available a and other aquatic invertebrat Data not available egradability: No data available o data available ects: An environmental hazard co Disposal considerations	ting. r cause effects on Exercise appropria Sodium iodide] es: Data not avail Bioaccumu PBT and vi annot be excluded	ate procedures to min lable ulative potential: No PvB assessment: No d in the event of unpro	imize potential hazaro data available o data available fessional handling or	ds.		
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Ingestion: Ingestion Skin: Causes redr Signs and sympto various skin reaction Additional information Section 12 Toxicity to fish: D Toxicity to daphnia Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gr regulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15	on may cause cough, sore throad n causes diarrhea, nausea, vomi ess and irritation. hess and even anaphylactic shock. hess an	ting. cause effects on Exercise appropria Sodium iodide] es: Data not avail Bioaccumu PBT and vi annot be excluded disposal of cata ordance with all ping name: N sing group: N b ERG Guide #	ate procedures to min lable ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities of local, state and fed lot Regulated ot applicable Not applicable	imize potential hazaro data available ofessional handling or only. Federal regula eral regulations or o	disposal. tions may a contract with	pply to empty c a licensed che	container. State and/or loc mical disposal agency.

dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

Page E1 of E2

Section 1

Identification

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

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Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

"с		NY 14414-9409 226-6177	Not for drug, food or household use.
Product	SODIUM OXALATE, 0.1 MOLAR SOLUTION		
Synonyms	Sodium Oxalate, Aqueous Solution		
Section 2	Hazards identification		
Pictograms Target orga GHS Classi Skin irritation Eye irritation GHS Label H315: Cause	Ins: Cardiovascular system, Central nervous system, Liver, Kidney	s P280: Wear prote P302+P352: IF OI P332+P313: If ski P362+P364: Take P305+P351+P333 Remove contact le	atement: s thoroughly after handling. ctive gloves/protective clothing/eye protection/face protection. N SKIN: Wash with plenty of water and soap. n irritation occurs: Get medical attention. off contaminated clothing and wash it before reuse. 3: IF IN EYES: Rinse cautiously with water for several minutes. enses, if present and easy to do. Continue rinsing. e irritation persists: Get medical attention.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Sodium oxalate		7732-18-5 62-76-0	98.66% 1.34%	231-791-2 200-550-3		
Section 4	First aid measures	1	1			

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Sodium oxalate	Not established	Not established	Not established		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

	Tatol.						
Section 9	Physical and chemical	properties					
Odor: No odor Odor threshol pH: Data not a Melting / Freezing Boiling point:	d: Data not available.	Flammability Explosion lim Vapor pressu Vapor density Relative density	rate (Water = 1): <1 (solid/gas): Data not itts: Lower / Upper: 1 re (mm Hg): 14 (wate / (Air = 1): 0.7 (water) / (Specific gravity): App): Complete in water.	Data not available r)	Auto-ignit Decompo Viscosity: Molecular	•	: Data not available re: Data not available. ble. e
Section 10	Stability and reactivity						
Chemical stab Conditions to	ility: Stable avoid: Excessive temperatures wh		ous polymerization:	Will not occur.			
Incompatible r	naterials: Strong oxidizers and ac	ids.					
-	composition products: Carbon of						
Section 11	Toxicological information	on					
Respiratory of Germ cell mut Carcinogenity NTP: No comp IARC: No comp OSHA: No com Reproductive STOT-single e STOT-repeated Aspiration haz Potential healt Inhalation: May Skin: May cau Eyes: Causes Signs and sym not available.	y be harmful if inhaled. / be harmful if swallowed. se irritation.	ilable els greater than or vels greater than o avels greater than o of our knowledge t minimize potential	equal to 0.1% is ident or equal to 0.1% is iden he chemical, physical a	ified as probable, pos tified as a carcinoger and toxicological prop	sible or confi n or potential	rmed human card carcinogen by OS	SHA.
Section 12	Ecological information						
Toxicity to dap Toxicity to algo Persistence an Mobility in soil	 No data available bhnia and other aquatic invertebrae: No data available nd degradability: No data available I: No data available effects: An environmental hazard Disposal consideration: 	le Bioaccum PBT and v cannot be exclude	ulative potential: No PvB assessment: No	o data available	disposal.		
	•			phy Endered recula	tions movie		ontainor State and/or las
regulations ma Section 14	al guidelines are intended for the ay be different. Dispose of in a Transport information	ccordance with a	l local, state and fed	eral regulations or	contract with	n a licensed che	mical disposal agency.
Hazard class	s: Not applicable Pa	ipping name: I cking group: N 16 ERG Guide #	lot applicable	Reportable Qua	ntity: No	Ma	arine pollutant: No
Exceptions.							
	Regulatory information						
Section 15	Regulatory information sidered to be listed if the CAS number for	or the anhydrous forn	n is on the Inventory list.				
Section 15 A chemical is con	• •	or the anhydrous form	n is on the Inventory list.	RCRA code	DSL	NDSL	CA Prop 65

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

GENERAL STORAGE CODE GREEN

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Section 1

Identification

"cutting edge science for the classroom"

Innovating Science[®] by Aldon Corporation 221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

For laboratory and industrial use only. Not for drug, food or household use.

Product	SODIUM PHOSPHATE, 0.1 MOLAR SOLUTION	
Synonyms	Sodium Phosphate, Water Solution	
Section 2	Hazards identification	
to the Globa Chemicals. Signal word Pictograms:	nce or mixture has not been classified as hazardous according ally Harmonized System (GHS) of Classification and Labeling of None required No symbol required ns: Eyes, Respiratory system	Supplemental information: Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.
GHS Label i	fication: None required nformation: Hazard statement: None required ry statement: None required	
Health hazar	<u>ot otherwise classified:</u> ds not otherwise classified (HHNOC) - Not Known ards not otherwise classified (PHNOC) - Not Known	
Section 3	Composition / information on ingredients	

Section 3	Section 3 Composition / information on ingredients							
Chemical Name		CAS #	%	EINECS				
Water Sodium phosphate, tr	ribasic, dodecahydrate	7732-18-5 10101-89-0	96.2% 3.8%	231-791-2 231-509-8				
Section 4	First aid measures		1					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

ERG: Emergency Response Guidebook.

Form 06/2015

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	Sodium phosphate	Not established	Not established	Not established		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirato								
Section 9	Physical and chen	Physical and chemical properties						
Odor: No odor. Odor threshold: pH: Data not avail Melting / Freezing poi	pint: Approximately 0°C (32°F) (proximately 100°C (212°F) (י	(water) Relative densi Relative densi	vate (Water = 1): <1 y (solid/gas): Data not mits: Lower / Upper: .ure (mm Hg): 14 (wate ty (Air = 1): 0.7 (water ity (Specific gravity): App s): Complete in water.	Data not available er))	Auto-igniti Decompos Viscosity: Molecular	•	: Data not available Ire: Data not available. ble. re	
Section 10	Stability and react	ivity						
Chemical stability Conditions to avo	y: Stable oid: Excessive temperatu		dous polymerization: ration.	Will not occur.				
ncompatible mat	terials: Strong oxidizers,	strong acids, antipyrine	, chloral hydrate, lead a	cetate, pyrogallol, res	orcinol, alkalo	ids, water and m	oisture.	
Hazardous decon	mposition products: Soo	dium oxides and phosph	norous.					
Section 11	Toxicological info	rmation						
IARC: No compone OSHA: No compor Reproductive tox	ent of this product present nent of this product presen nent of this product prese (icity: Data not available	t at levels greater than on the strength of th	or equal to 0.1% is iden	tified as probable, pos	sible or confir	med human card		
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Ingestion: May be Skin: May cause i Eyes: May cause Signs and sympto not available. Exe	e harmful if inhaled. e harmful if swallowed. irritation. irritation. coms of exposure: To the ercise appropriate procedu	ble e best of our knowledge ures to minimize potentia	al hazards.	and toxicological prop	erties have no	ot been thorough	ly investigated. Specific data	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Ingestion: May be Skin: May cause i Eyes: May cause Signs and sympto not available. Exe	xposure: Data not availa d: Data not available effects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. coms of exposure: To the	ble e best of our knowledge ures to minimize potentia 75000 [Sodium phosph	al hazards.	and toxicological prop	erties have no	ot been thorough	ly investigated. Specific data	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause i Eyes: May cause i Eyes: May cause Signs and sympto not available. Exe Additional inform Section 12 Toxicity to fish: N Toxicity to fish: N Toxicity to daphai Toxicity to algae: Persistence and c Mobility in soil: N	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC95 Ecological informa No data available is and other aquatic inv No data available degradability: No data a	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and	al hazards. ate] ailable mulative potential: No vPvB assessment: N	o data available lo data available		ot been thorough	ly investigated. Specific data	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause is Eyes: May cause Signs and symptr not available. Exe Additional inform Section 12 Foxicity to fish: N Foxicity to fish: N Foxicity to algae: Persistence and c Mobility in soil: N Dther adverse effo Section 13	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC957 Ecological informa No data available degradability: No data available degradability: No data available fects: An environmental h Disposal consider	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be excluc rations	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpro	o data available lo data available ofessional handling or	disposal.			
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause is Eyes: May cause Signs and symptr not available. Exe Additional inform Section 12 Foxicity to fish: N Foxicity to fish: N Foxicity to algae: Persistence and c Mobility in soil: N Other adverse effo Section 13 Fhese disposal g	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC957 Ecological informa No data available is and other aquatic inv No data available degradability: No data a No data available fects: An environmental h Disposal consider guidelines are intended	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be excluc rations for the disposal of ca	al hazards. ate] ailable wPvB assessment: No led in the event of unpro- talog-size quantities of	o data available lo data available ofessional handling or only. Federal regula	disposal. ations may a	pply to empty c	ontainer. State and/or loc	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause i Eyes: May cause i Eyes: May cause Signs and sympton not available. Exe Additional inform Section 12 Toxicity to fish: N Toxicity to fish: N Toxicity to daphni Toxicity to algae: Persistence and c Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may interest of the section to the section t	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC957 Ecological informa No data available degradability: No data available degradability: No data available fects: An environmental h Disposal consider	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be excluo rations for the disposal of ca of in accordance with a	al hazards. ate] ailable wPvB assessment: No led in the event of unpro- talog-size quantities of	o data available lo data available ofessional handling or only. Federal regula	disposal. ations may a	pply to empty c	ontainer. State and/or loc	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause is Eyes: May cause is Eyes: May cause Signs and symptr not available. Exe Additional inform Section 12 Foxicity to fish: N Foxicity to fish: N Foxicity to daphni Foxicity to algae: Persistence and c Mobility in soil: N Dther adverse effor Section 13 These disposal g regulations may is Section 14 UN/NA number Hazard class:	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC957 Ecological informa No data available degradability: No data available fects: An environmental h Disposal consider guidelines are intended be different. Dispose of Transport informa r: Not applicable	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be exclud rations for the disposal of ca of in accordance with a ation Shipping name: Packing group:	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpre- talog-size quantities of all local, state and feo Not Regulated Not Regulated Not applicable	o data available lo data available ofessional handling or only. Federal regula	disposal. ations may a contract with	pply to empty c a licensed che	ontainer. State and/or loc	
STOT-repeated ex Aspiration hazard Potential health en Indiation: May be Skin: May cause is Eyes: May cause is Eyes: May cause is Signs and symptot for available. Exe Additional inform for availab	xposure: Data not availa d: Data not available effects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. coms of exposure: To the ercise appropriate procedunation: RTECS #: TC95: Ecological informa No data available degradability: No data available degradability: No data available fects: An environmental h Disposal consider guidelines are intended be different. Dispose of Transport informa r: Not applicable Not applicable	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be exclud rations for the disposal of ca of in accordance with a ation Shipping name: Packing group: 2016 ERG Guide	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpre- talog-size quantities of all local, state and feo Not Regulated Not Regulated Not applicable	o data available lo data available ofessional handling or only. Federal regula deral regulations or o	disposal. ations may a contract with	pply to empty c a licensed che	ontainer. State and/or loc mical disposal agency.	
STOT-repeated ex Aspiration hazard Potential health en Indiation: May be Skin: May cause is Eyes: May cause is Eyes: May cause is Signs and symptit for available. Exe Additional inform for availab	xposure: Data not availa d: Data not available affects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC957 Ecological informa No data available degradability: No data available fects: An environmental h Disposal consider guidelines are intended be different. Dispose of Transport informa r: Not applicable	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be exclud rations for the disposal of ca of in accordance with a ation Shipping name: Packing group: 2016 ERG Guide ation	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpre- talog-size quantities a all local, state and feo Not Regulated Not Regulated Not applicable # Not applicable	o data available lo data available ofessional handling or only. Federal regula deral regulations or o	disposal. ations may a contract with	pply to empty c a licensed che	ontainer. State and/or loc mical disposal agency.	
STOT-repeated ex Aspiration hazard Potential health en Indiation: May be Skin: May cause is Eyes: May cause is Eyes: May cause is Signs and symptit for available. Exe Additional inform for availab	xposure: Data not availa d: Data not available effects: e harmful if inhaled. e harmful if swallowed. irritation. irritation. irritation. irritation. Soms of exposure: To the ercise appropriate procedunation: RTECS #: TC95: Ecological informa No data available degradability: No data available tects: An environmental h Disposal consider guidelines are intended be different. Dispose o Transport informa r: Not applicable Not applicable Regulatory inform ared to be listed if the CAS nut	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and nazard cannot be exclud rations for the disposal of ca of in accordance with a ation Shipping name: Packing group: 2016 ERG Guide ation	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpre- talog-size quantities a all local, state and feo Not Regulated Not Regulated Not applicable # Not applicable	o data available lo data available ofessional handling or only. Federal regula deral regulations or o	disposal. ations may a contract with	pply to empty c a licensed che	ontainer. State and/or loo mical disposal agency.	
STOT-repeated ex Aspiration hazard Potential health e Inhalation: May be Skin: May cause i Eyes: May cause i Eyes: May cause Signs and symptot not available. Exe Additional inform Section 12 Toxicity to fish: N Toxicity to fish: N Toxicity to daphni Toxicity to algae: Persistence and c Mobility in soil: N Other adverse effi Section 13 These disposal g regulations may i Section 14 UN/NA number Hazard class: I Exceptions: N Section 15 A chemical is conside	xposure: Data not availa d: Data not available effects: e harmful if inhaled. e harmful if swallowed. irritation. coms of exposure: To the ercise appropriate procedunation: RTECS #: TC95: Ecological informa No data available degradability: No data available degradability: No data available fects: An environmental h Disposal consider guidelines are intended be different. Dispose of Transport informa r: Not applicable Not applicable Not applicable Regulatory inform ered to be listed if the CAS no ponent	e best of our knowledge ures to minimize potentia 75000 [Sodium phosph ation ertebrates: No data ava vailable Bioaccur PBT and hazard cannot be exclud rations for the disposal of ca of in accordance with a ation Shipping name: Packing group: 2016 ERG Guide ation umber for the anhydrous for TSCA Listed	al hazards. ate] ailable mulative potential: No vPvB assessment: N led in the event of unpre- talog-size quantities of all local, state and feo Not Regulated Not Regulated Not applicable # Not applicable rm is on the Inventory list.	o data available lo data available ofessional handling or only. Federal regula deral regulations or Reportable Qua	disposal. ations may a contract with a ntity: No	pply to empty c a licensed che Ma	ontainer. State and/or loc mical disposal agency. arine pollutant: No	

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Section 1

Identification

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For laboratory and industrial use only. Not for drug, food or household use.

oduct SODIUM SILICATE, 0.1 MOLAR SOLUTION	
vnonyms Sodium Silicate, Water Solution	
ection 2 Hazards identification	
gnal word: DANGER ctograms: GHS05 / GHS07 irget organs: Eyes, Skin, Mucous membranes Image: Antiperson of the state of	 Precautionary statement: P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363: Wash contaminated clothing before reuse. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER or doctor. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	on 3 Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Sodium metasilicat	e, pentahydrate	7732-18-5 10213-79-3	97.88% 2.12%	231-791-2 229-912-9		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SEVERE SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Sodium metasilicate	Not established	Not established	Not established		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-

approved respirator.		-	0	. ,	·		
Section 9	Physical and chemical pro	perties					
Appearance: Clear, Odor: No odor. Odor threshold: Da pH: Data not availab Melting / Freezing point:	colorless liquid. ta not available. le. Approximately 0°C (32°F) (water) imately 100°C (212°F) (water)	Evaporation ra Flammability (s Explosion limit Vapor pressure Vapor density Relative density (te (Water = 1): <1 solid/gas): Data not is: Lower / Upper: I 6 (mm Hg): 14 (wate (Air = 1): 0.7 (water) Specific gravity): App Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular 1		: Data not available re: Data not available. ble. e
Section 10	Stability and reactivity						
Incompatible mater		ds and acid fume may be produced	on prolonged contac	t with metals such as		, lead and zinc.	Decomposed by acids.
Section 11	Toxicological information						
Skin corrosion/irrita Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No component IARC: No component OSHA: No component Ca Prop 65: This pro Reproductive toxici STOT-single exposed STOT-repeated expo Aspiration hazard: Potential health effer Inhalation: May caus Ingestion: Harmful if Skin: Causes severed Eyes: Causes eye d Signs and symptom Exercise appropriate	of this product present at levels to f this product present at level at of this product present at level duct does not contain any chem ty: Data not available pre: The substance or mixture i psure: Data not available Data not available psts: se respiratory irritation. May cau swallowed. May cause burns to a skin burns.	kin-human: 250 m ole greater than or e greater than or is greater than or icals known to th s classified as sp ob digestive tract. ng, diarrhea, sevual hazards.	qual to 0.1% is identi equal to 0.1% is ident equal to 0.1% is iden e State of California to ecific target organ tox ratory tract. Over-exp ere irritation, and tissu	ified as probable, po tified as a carcinoge o cause cancer or re icant, single exposur posure may result in	ssible or confir n or potential c productive toxi re, category 3 v lung tissue dar	med human card arcinogen by OS city. with respiratory e nage.	SHA.
Section 12	Ecological information						
Toxicity to daphnia Toxicity to algae: No Persistence and deg Mobility in soil: No	gradability: No data available	es: Sodium meta Bioaccumu PBT and vi	isilicate: Daphnia ma Ilative potential: No PvB assessment: No	igna (Crustacea), EC data available o data available		./100 hours	
	delines are intended for the o different. Dispose of in acco						
Section 14	Transport information		,				
UN/NA number: Hazard class: 8 Exceptions: Lim	UN1760 Shipping Packing g ited quantity equal to or less	roup: III		Disodium trioxosil able Quantity: No G Guide # 154	,	Ma	arine pollutant: No
Section 15	Regulatory information						
	to be listed if the CAS number for t		•		Del	NDO	CA Dece 65
Compone Sodium metasilicate	in	Listed	CERLCA (RQ) Not listed	RCRA code Not listed	DSL Not listed	NDSL Not listed	CA Prop 65 This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
							ered by them and must make indepen- s. NTP: National Toxicology Program,

dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

GENERAL STORAGE CODE GREEN

Page E1 of E2

Identification

"cutting edge science for the classroom"

Innovating Science[®] by Aldon Corporation 221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

CHEMTREC 24 Hour Emergency

Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product	SODIUM SULFATE, 0.1 MOLAR SOLUTION	
Synonyms	Sodium Sulfate, Water Solution	
Section 2	Hazards identification	
This substar to the Globa Chemicals. Signal word Pictograms: Target orgar GHS Classif GHS Label in	nce or mixture has not been classified as hazardous according illy Harmonized System (GHS) of Classification and Labeling of : None required : No symbol required ns: None known fication: None required nformation: Hazard statement: None required ry statement: None required	Supplemental information: Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wea protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.
	<u>ot otherwise classified:</u> ds not otherwise classified (HHNOC) - Not Known	

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
Water Sodium sulfate		7732-18-5 7757-82-6	98.58% 1.42%	231-791-2 231-820-9			
Section 4	First aid measures						

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE TRANSIENT IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE TRANSIENT IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Sodium sulfate	None established.	None established.	None established.			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Physical and chemical pr	operties	
Appearance: Clear, colorless liquid. Odor: No odor. Odor threshold: Data not available. pH: Data not available Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water) Flash point: Data not available	Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water) Relative density (Specific gravity): Approximately 1.0 (water) Solubility(ies): Complete in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
Section 10 Stability and reactivity		
Chemical stability: Stable Conditions to avoid: Excessive temperatures white Incompatibilities with other materials: Molten ac Hazardous decomposition products: Oxides of s	ive metals, including aluminum and magnesium, acids.	
Section 11 Toxicological information		
IARC: No component of this product present at leve		sible or confirmed human carcinogen by IARC.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Skin: May cause mild irritation.

Eyes: May cause mild irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: No data available

Section 12 Ecological information

Toxicity to fish: Gambusia affinis (Fish, fresh water) LC50: 120 mg/l/96 hours [Sodium sulfate]

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea) EC50: 630 mg/l/96 hours [Sodium sulfate]

Toxicity to algae: Chlorella pyrenoidosa (Algae) EC199: 57,700 mg/l/8 days [Sodium sulfate]

Persistence and degradability: No data available Bioaccumulative potential: No data available

Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14

Transport information

Hazard class: Not applicablePackinExceptions: Not applicable2016		pping name: Not Regulated cking group: Not applicable 6 ERG Guide # Not applicable		Marine pollutant: No			
Section 15 Reg	ulatory information						
A chemical is considered to be	listed if the CAS number for the	anhydrous form	is on the Inventory list.				
Component		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sodium sulfate		Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16 Oth	er information						reproductive toxicity:
Section 16 Otr	er information						
dent determinations of suitabili		tion from all source	ces to assure proper use	of these materials and	the safety and he	ealth of employees.	ed by them and must make indepen- NTP: National Toxicology Program, sure, RE: Repeated Exposure,

ERG: Emergency Response Guidebook

Form 06/2015

Section 1	Identification		Page E1 of E2
	vating Science [®] by Aldon Corporation tting edge science for the classroom"	221 Rochester Street Avon, NY 14414-9408 (585) 226-6177	CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	LEAD NITRATE, 0.1 MOLAR SOLUTION		
Synonyms	Lead Dinitrate, Aqueous Solution		
Section 2	Hazards identification		
GHS Classii Acute toxicit Eye irritation Acute toxicit Reproductive STOT-RE (C) Acute aquati Chronic aqua GHS Label i H3003 + H333 H320: Cause H360: May ci	 is: GHS08 / GHS09 ins: Blood, Central nervous system ins: Blood, Central nervous system ins: (ategory 5) in (Category 2B) in Inhalation (Category 5) e toxicity (Category 1A) 		 Precautionary statement(s): P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for oreathing. P308+P313: IF exposed or concerned: Get medical attention. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
Water Lead nitrate		7732-18-5 10099-74-8	96.69% 3.31%	231-791-2 233-245-9			
Section 4	First aid measures						

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam. Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	Lead & inorganic compounds, as Pb	TWA: 0.05 mg/m ³ (A3)	TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemica	I properties							
Odor: Mild chara Odor threshold: pH: Data not ava Melting / Freezing po	Data not available. ilable. int: Approximately 0°C (32°F) (water proximately 100°C (212°F) (water	Flammability (s Explosion limit Vapor pressure Vapor density (Relative density (te (Water = 1): <1 solid/gas): Data not ts: Lower / Upper: I e (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): App Complete in water.	Data not available r)	Auto-ignit Decompos Viscosity: Molecular		: Data not available I re: Data not available. ble. e		
Section 10	n 10 Stability and reactivity								
Chemical stability: Stable Hazardous polymerization: Will not occur.									
Conditions to av	oid: Excessive temperatures	which cause evaporati	ion.						
Incompatible ma	terials: Ammonium thiocyana	te, powdered carbon,	lead hypophosphite.						
Hazardous deco	mposition products: Lead ox	ides and nitrogen oxic	des.						
Section 11	Toxicological informat	ion							
Germ cell mutag Carcinogenity: I NTP: (R) Reasons IARC classified: O OSHA: No compo CA Prop 65: \triangle W birth defects or ott Reproductive to: STOT-single exp	kin sensitization: Data not av enicity: Data not available Data not available ably anticipated to be a human froup 2A: Probably carcinogen onent of this product present at ARNING!: This product can e: her reproductive harm. kicity: Data not available osure: The substance or mixt kxposure: Data not available	carcinogen. [Lead nit ic to humans. [Lead n levels greater than or cpose you to chemical	itrate] equal to 0.1% is ider Is including Lead and	lead compounds, wh	ich are knowr	n to the State of C	California to cause cancer and		
Aspiration hazar Potential health Inhalation: Harmf Ingestion: Harmful Skin: Harmful if a Eyes: Causes ey Signs and sympt by any route can e "lead line" on the e	d: Data not available effects: ful if inhaled. Ji if swallowed. bsorbed through skin. Causes	cumulative poison and ziness, cyanosis, decr ss of appetite, insomr	eased blood pressure	e and possible respira	atory paralysis	 Acute poisonin 	g can lead to muscle weaknes		
Aspiration hazar Potential health Inhalation: Harmfu Ingestion: Harmful Skin: Harmful if a Eyes: Causes ey Signs and sympt by any route can "lead line" on the Additional inform Section 12	d: Data not available effects: iu if inhaled. ul if swallowed. bsorbed through skin. Causes e irritation. toms of exposure: Lead is a cause headache, vomiting, diz: gums, metallic taste, definite lo nation: RTECS #: OG210000 Ecological information	cumulative poison and ziness, cyanosis, decr iss of appetite, insomr 00 [Lead nitrate] 1	eased blood pressure nia, dizziness, high le	e and possible respira ad levels in the blood	atory paralysis	 Acute poisonin 	g can lead to muscle weaknes		
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, ERG: Emergency Response Guidebook.

Section 1	Identification		Page E1 of E2
	vating Science [®] by Aldon Corporation tting edge science for the classroom"	221 Rochester Street Avon, NY 14414-9409 (585) 226-6177	CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	SILVER NITRATE, 0.1 MOLAR (0.1 NORMAL) SOLU	TION	
Synonyms	Silver(I) Nitrate, Water Solution / Silver Nitrate, 0.1M	(0.1N) Solution	
Section 2	Hazards identification		
Pictograms Target organ GHS Classif Skin irritation Eye irritation Aquatic Acut GHS Label i H315: Cause H319: Cause	 WARNING GHS07 / GHS09 ns: Kidneys, Liver Fication: (Category 2) (Category 2A) (Category 1) nformation: Hazard statement: as skin irritation. as serious eye irritation. oxic to aquatic life. 	P P P P P P R P P R P P R P P P P	 Precautionary statement(s): P264: Wash hands thoroughly after handling. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P391: Collect spillage. P501: Dispose of contents/container to a licensed chemical disposal agency in iccordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
Water Silver nitrate		7732-18-5 7761-88-8	98.3% 1.7%	231-791-2 231-853-9			
Section 4	First aid measures						

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CONTACT CAUSES SEVERE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CONTACT CAUSES IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	Silver, soluble compounds, as Ag	TWA: 0.01 mg/m ³	TWA: 0.01 mg/m ³	TWA: 0.01 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator

Continu 0									
Section 9	Physical and chemical pro	perties							
	xteristic odor. Data not available. lable. nt: Approximately 0°C (32°F) (water) roximately 100°C (212°F) (water)	Flammability (Explosion lim Vapor pressur Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: I re (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available r)	Auto-ignit Decompos Viscosity: Molecular	•	: Data not available Ire: Data not available. ble. e		
Section 10	Stability and reactivity								
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures which cause evaporation.									
Incompatible mat	erials: Combustible materials, red	lucing agents, or	rganic substances, stro	ong basis and alkalis.					
Hazardous decon	nposition products: Nitrogen oxid	des.							
Section 11	Toxicological information								
Respiratory or sk Germ cell mutage Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compon OSHA: No compon STOT-single expo STOT-repeated ex Aspiration hazard Potential health e	ent of this product present at levels ent of this product present at levels nent of this product present at level icity: Data not available osure: Data not available posure: Data not available d: Data not available offects:	greater than or e greater than or e	equal to 0.1% is ident	ified as probable, pos	sible or confi	rmed human card	0,		
Ingestion: May be Skin: Contact with Eyes: Contact with Signs and symptot thoroughly investig	ted inhalation may produce varying harmful by ingestion. I skin can produce irritation. In eyes may cauxse severe irritaitor oms of exposure: See Potential h gated. Specific data is not available nation: RTECS #: VW4725000 [S	n. nealth effects ab e. Exercise appi	ove. To the best of ou	r knowledge the chen		l and toxicologica	al properties have not been		
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Int determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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Section 1	Identification				Page E1 of E
	vating Science® utting edge science for th	a classroom"	221 Rochester Stree Avon, NY 14414-94 585) 226-6177		CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	COPPER(II) NITRATE, 0.1 MOI	AR SOLUTION			
Synonyms	Cupric Nitrate, Water Solution				
Section 2	Hazards identification	'n			
GHS Classi Acute toxicil Skin irritatio Eye irritatior Aquatic acu Aquatic acu Aquatic chro GHS Label H303: May I H315: Caus H320: Caus		y effects.		P301+P312: IF SWALL P305+P351+P338: IF Remove contact lenses P337+P313: If eye irrita P302+P352: IF ON SK P332+P313: If skin irrit P362+P364: Take off c P391: Collect spillage. P501: Dispose of conte	roughly after handling.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Cupric nitrate, trihydra	ate	7732-18-5 10031-43-3	97.584% 2.416%	231-791-2 221-838-5 [anhydrous]		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal prote	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Copper, dusts & mists, as Cu	TWA: 1 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemi	ical properties					
Appearance: Cle Odor: No odor. Odor threshold: pH: Data not avai Melting / Freezing po Boiling point: App Flash point: Data	ear, colorless liquid. Data not available. ilable. int: Approximately 0°C (32°F) (w proximately 100°C (212°F) (wa	Evaporation ra Flammability (Explosion limi Vapor pressur Vapor density ater) Relative density	ate (Water = 1): <1 solid/gas): Data not a ts: Lower / Upper: E e (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appr : Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available Ire: Data not available. ble. re
Section 10	Stability and reactiv	/ity					
Chemical stability Conditions to avo	y: Stable oid: Excessive temperature		us polymerization: \ ion.	Will not occur.			
Incompatible mat	terials: Strong oxidizing ag	gents, aluminum cyanide	s, esters, sodium hypo	phosphite, stannous	chloride and	thiocyanates.	
Hazardous decon	mposition products: Nitro	gen oxides, copper oxide	es and copper dust.				
Section 11	Toxicological inform	nation					
Carcinogenity: E NTP: No compone IARC: No compon OSHA: No compon Reproductive tox STOT-single expo STOT-repeated ex	enicity: Data not available Data not available ent of this product present a ent of this product present a nent of this product present cicity: Data not available osure: Data not available xposure: Data not available	It levels greater than or e at levels greater than or t at levels greater than or	equal to 0.1% is identi	ified as probable, pos	sible or confir	med human card	0 ,
Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Signs and sympt procedures to min Additional inform	d: Data not available effects: ul if inhaled. ul if swallowed. n skin causes irritation and/o th eyes causes irritation and coms of exposure: Materia imize potential hazards. nation: RTECS #: GL7875	or burns. J/or burns. al is extremely destructiv 5000 [Cupric nitrate]	e to tissue of the mucc	bus membranes and u	upper respirat	ory tract, eyes, a	and skin. Exercise appropriate
Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Signs and sympt procedures to min	d: Data not available effects: ul if inhaled. Il if swallowed. In skin causes irritation and/o theyes causes irritation and coms of exposure: Materia imize potential hazards. Ination: RTECS #: GL7875 Ecological informat	or burns. J/or burns. al is extremely destructiv 5000 [Cupric nitrate]	e to tissue of the mucc	ous membranes and u	upper respirat	ory tract, eyes, a	and skin. Exercise appropriate
Potential health of Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Signs and sympt procedures to min Additional inform Section 12 Toxicity to fish: N Toxicity to fish: N Toxicity to daphe: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of	d: Data not available affects: ul if inhaled. ul if swallowed. n skin causes irritation and/o th eyes causes irritation and/o Ecological informat No data available Idegradability: No data available Idegradability: No data available Idegradability: No data available Idegradability: An environmental ha Disposal considera	or burns. d/or burns. al is extremely destructive 5000 [Cupric nitrate] ion rtebrates: No data availa ailable Bioaccumu PBT and vi uzard cannot be excluded tions or the disposal of cata	able Ilative potential: No PvB assessment: No I in the event of unprof log-size quantities o	data available o data available fessional handling or nly. Federal regula	disposal. tions may aj	oply to empty c	container. State and/or loca
Potential health of Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Signs and sympt procedures to min Additional inform Section 12 Toxicity to fish: N Toxicity to fish: N Toxicity to dapher Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of	d: Data not available affects: ul if inhaled. I if swallowed. n skin causes irritation and/o th eyes causes irritation and/o Ecological informat No data available Information and other aquatic inventations No data available Information and other aquatic inventations No data available Information and other aquatic inventations Information and other aquatic inventations Informatic i	or burns. d/or burns. al is extremely destructive 5000 [Cupric nitrate] ion rtebrates: No data availa ailable Bioaccumu PBT and vi uzard cannot be excluded titions or the disposal of cata in accordance with all	able Ilative potential: No PvB assessment: No I in the event of unprof log-size quantities o	data available o data available fessional handling or nly. Federal regula	disposal. tions may aj	oply to empty c	container. State and/or loca
Potential health of Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Eyes: Contact with Signs and sympt procedures to min Additional inform Section 12 Toxicity to fish: M Toxicity to daphen Toxicity to daphen Toxici	d: Data not available affects: ul if inhaled. ul if swallowed. n skin causes irritation and/d th eyes causes irritation and/d Ecological informat No data available degradability: No data available degradability: No data available degradability: No data available fects: An environmental ha Disposal considera guidelines are intended for be different. Dispose of Transport informat Thot applicable lot applicable	or burns. J/or burns. al is extremely destructive 5000 [Cupric nitrate] ion rtebrates: No data availat ailable Bioaccumu PBT and vi nzard cannot be excluded tions or the disposal of cata in accordance with all ion Shipping name: N Packing group: No 2016 ERG Guide #	able VB assessment: No in the event of unprof log-size quantities o local, state and fede ot Regulated ot Regulated ot applicable	data available o data available fessional handling or nly. Federal regula	disposal. tions may a _f contract with	oply to empty c a licensed che	container. State and/or loca
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Potential health of Inhalation: Harmfu Ingestion: Harmfu Skin: Contact with Eyes: Contact with Signs and sympt procedures to min Additional inform Section 12 Toxicity to fish: M Toxicity to daphen Toxicity to daphen Toxici	d: Data not available affects: ul if inhaled. ul if swallowed. n skin causes irritation and/o th eyes causes irritation and/o Ecological informat No data available degradability: No data available degradability: No data available degradability: No data available fects: An environmental ha Disposal considera guidelines are intended for be different. Dispose of Transport informat Transport informat is Not applicable Not applicable Regulatory informat ared to be listed if the CAS num	or burns. d/or burns. al is extremely destructive 5000 [Cupric nitrate] ion rtebrates: No data availat ailable Bioaccumu PBT and vi azard cannot be excluded tions or the disposal of cata in accordance with all ion Shipping name: N Packing group: No 2016 ERG Guide # tion	able VB assessment: No VB assessment: No d in the event of unprof log-size quantities o local, state and fede ot Regulated ot Regulated ot applicable Not applicable	data available o data available fessional handling or nly. Federal regula eral regulations or o	disposal. tions may a _f contract with	oply to empty c a licensed che	container. State and/or loca mical disposal agency.

dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Page E1 of E2

Section 1

Product

Identification

CHEMTREC 24 Hour Emergency

Innovating Science[®] by Aldon Corporation

"cutting edge science for the classroom"

CADMIUM NITRATE, 0.1 MOLAR SOLUTION

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177

Phone Number (800) 424-9300 For laboratory and industrial use only.

Not for drug, food or household use.

Synonyms Cadmium Nitrate, Water Solution	
Section 2 Hazards identification	
 Signal word: DANGER Pictograms: GHS06 / GHS08 / GHS09 Target organs: Liver, Kidneys, Lungs Acute toxicity, inhalation (Category 2) Mutagenicity (Category 1B) Carcinogenicity (Category 1B) Reproductive toxicity (Category 1B) STOT-RE (Category 2) Aquatic toxicity acute (Category 2) Aquatic toxicity chronic (Category 2) GHS Label information: Hazard statement: H330: Fatal if inhaled. H340: May cause genetic defects. H350: May cause damage for organs through prolonged or repeated exposure. H401: Toxic to aquatic life. H411: Toxic to aquatic life with long lasting effects. 	 Precautionary statement: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P284: Wear respiratory protection. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER or doctor. P308+P313: IF exposed or concerned: Get medical attention. P391: Collect spillage. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.
Health hazards not otherwise classified (HHNOC) - Not Known	1
Physical hazards not otherwise classified (PHNOC) - Not Known Section 3 Composition / information on ingredients	

000010110						
Chemical Name		CAS #	%	EINECS		
Water Cadmium nitrate		7732-18-5 10022-68-1	96.92% 3.08%	231-791-2 233-710-6 (anhydrous)		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: FATAL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fireexposed containers cool

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation. Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal prot	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Cadmium compounds, as Cd	TWA: 0.01 mg/m ³ (A2)	TWA: 0.005 mg/m ³	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-

Acute toxicity: Acute toxicity estimate: Oral-rat LD50: 9740 mg/kg / Inhalation-rat LC50: 0.07 mg/L Shin corrosion/irritation: Data not available Respiratory or skin sensitization: Data not available Gern cell mutagenicity: Data not available Carcinogenity: Data not available STOT-single exposure: Carcinogenic for above the OEL could cause death. The effects may be delayed. Medical observation is indicated. Exercise appropri procedures to minimize potential hazards. Additional information: RTECS #: Cadmium nitrate: EV1850000 Section 12 Ecological information: Toxicity to daphin and other aquatic Invertebrates: Cadmium nitrate: EV1850000 Section 13 Disposal considerations Bioaccumulative potential: No data available Disposal considerations Bioaccumulative potential: No data available Disposal considerations Section 13 Disposal considerations Section 13 Disposal considerations Section 14 Tansport information: Not applicable Shipping name: Not Regulated Packing group: Not applicable Shipping name: Not Regulated Packing group: Not applicable Socie Si Regulatory information: Section 14 Tansport information: Socie Si Regulatory information: Socie Si Regulatory informa		Physical and chemical pre-	operties					
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures which cause exportation. Incompatible materials: Reductors. Incompatible materials: Reductors. Conditions or avoid: Excessive temperatures which cause exportation. Section 11 Toxicological information Acute toxicity: scatte toxicity estimate: Oral-rat: LDS0: 9740 mg/kg / Inhalation-rat.LCS0: 0.07 mg/L. Shin corrosion/intration: Data not available Serious sey: damage/intration: Data not available Garrinogently: Data not available Garrinogently: Data not available Garrinogently: Data not available Garrinogently: Data not available Garrinogently: Data not available Garrinogently: Data not available StrOn-single exposure: Data not available StrOn-single exposure: Data not available STO-single exposure: Data not available StrOn-single exposure: Data not available STO-single exposure: Data not available StrOn-single exposure: Data not available STO-single exposure: Data not available StrOn-single exposure: Data not available StrOn-single exposur	Odor threshold: Dat pH: Data not availabl Melting / Freezing point: Boiling point: Approx	a not available. le. Approximately 0°C (32°F) (water) imately 100°C (212°F) (water)	Flammability (Explosion limi Vapor pressure Vapor density Relative density	solid/gas): Data not ts: Lower / Upper: [e (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): App	Data not available r)	Auto-ignit Decompos Viscosity: Molecular	ion temperature sition temperatu Data not availab formula: Mixtur	: Data not available Ire: Data not available. ble. re
Conditions to avoid: "Excessive temperatures which cause evaporation." Incompatible materials: Reducing agents, phosphorous, copper alloys and organic materials. Hazardous decomposition products: Cadminum oxides and nitrogen oxides. Section 11 Toxicological informatio: Total not available Section 12 Cadminum compounds] ARC classified: "Cadminum compounds] ARC classified: "ARC cl	Section 10	Stability and reactivity						
Hzardous decomposition products: Cadmium oxides and nitrogen oxides. Socian 11 Toxicological information Acute toxicity: Acute toxicity estimate: Oral-rat LD50: 9740 mg/kg / Inhalation-rat LC50: 0.07 mg/L Sin corrosion/irritation: Data not available Sorious eye damage/irritation: Data not available Sorious eye damage/irritation: Data not available Reprint of the second example of the sec	Conditions to avoid:	Excessive temperatures whic	h cause evaporati	ion.				
Acute toxicity:	•				ais.			
Skin corosion/irritation: Data not available Respiratory or skin sensitization: Data not available Gern cell mutagenicity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available SHA: Carcinogenity: Data not available SHA: Carcinogenity: Data not available SGHA: Carcinogenity: Data not available STOI-single exposure: Data not available String and symptoms of exposure to cause available Strin and thisin causes andpain Str	Section 11	Toxicological information	I					
Toxicity to fish: Cadmium nitrate: Oncorhynchus mykiss (rainbow trout), EC50 = 50 ug/L/24 hours Toxicity to daphnia and other aquatic invertebrates: Cadmium nitrate: Daphnia magna (water flea) EC50 = 120 ug/L/24 hours [intoxication, immobilization] Toxicity to algae: Cadmium nitrate: Chlorella vulgaris (Algae), EC50 = 1400 ug/L/5 days [biochemistry, chlorophyll] Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: Toxic to aquatic life with long lasting effects. Section 13 Section 13 Disposal considerations These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport information UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Section 15 Regulatory information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Carcinogenity: Data NTP: Known to be a h IARC classified: Grou OSHA: Carcinogen de Ca Prop 65: ▲ WARN and reproductive harr Reproductive toxicit STOT-repeated exposu STOT-repeated exposu Aspiration heazard: Ⅱ Potential health effe Inhalation: Inhalation Ingestion: Ingestion of	not available numan carcinogen. [Cadmium o p 1: Carcinogenic to humans. [efined with no further categoriz: NING! This product can expose n. y: Data not available re: Data not available soure: Data not available Data not available cts: may cause cough and labored auses abdominal pain, burning in causes irritation with redness	[Cadmium comport ation. [Cadmium of you to chemicals d breathing. Symp g sensation, diarrh s. edness and pain.	compounds] including Cadmium a otoms may be delayed iea, nausea, vomiting.				
Toxicity to daphnia and other aquatic invertebrates: Cadmium nitrate: Daphnia magna (water flea) EC50 = 120 ug/L/24 hours [intoxication, immobilization] Toxicity to algae: Cadmium nitrate: Chlorella vulgaris (Algae), EC50 = 1400 ug/L/5 days [biochemistry, chlorophyll] Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: Toxic to aquatic life with long lasting effects. Section 13 Disposal considerations These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport information UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Section 15 Regulatory information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL APROF Gace <td>Eyes: Contact with ey Signs and symptom procedures to minimize</td> <td>ze potential hazards.</td> <td></td> <td></td> <td>, ,</td> <td></td> <td></td> <td>dicated. Exercise appropriate</td>	Eyes: Contact with ey Signs and symptom procedures to minimize	ze potential hazards.			, ,			dicated. Exercise appropriate
These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or l regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport information UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Packing group: Not applicable Conf ERG Guide # Not applicable Section 15 Regulatory information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL CA Prop 65 Cadmium nitrate Listed Not listed Not listed Listed Not listed MarNING -Cancer	Eyes: Contact with eyes: Signs and symptom procedures to minimiz Additional information	e potential hazards. on: RTECS #: Cadmium nitra			, ,			dicated. Exercise appropriate
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Section 14 Transport information UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Packing group: Not applicable Packing group: Not applicable Section 15 Regulatory information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL CA Prop 65 Cadmium nitrate Listed Not listed Not listed Listed Not listed Listed Not listed	Eyes: Contact with eyes: Signs and symptom procedures to minimiz Additional informatii Section 12 Toxicity to fish: Cad Toxicity to daphnia a Toxicity to algae: Ca Persistence and deg Mobility in soil: No co Other adverse effect Section 13	te potential hazards. on: RTECS #: Cadmium nitra Ecological information mium nitrate: Oncorhynchus n and other aquatic invertebrate dmium nitrate: Chlorella vulga radability: No data available data available s: Toxic to aquatic life with lon Disposal considerations	ate: EV1850000 nykiss (rainbow tro es: Cadmium nitra ris (Algae), EC50 Bioaccumu PBT and vF ng lasting effects.	ate: Daphnia magna (= 1400 ug/L/5 days [b l ative potential: No PvB assessment: No	24 hours water flea) EC50 = 1 iochemistry, chloropt data available o data available	ıyll]		immobilization]
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Component TSCA CERLCA (RQ) RCRA code DSL NDSL CA Prop 65 Cadmium nitrate Listed Not listed Not listed Listed Not listed Listed Not listed Not listed Not listed Mathematical Concernance	Eyes: Contact with ey Signs and symptom procedures to minimiz Additional informati Section 12 Toxicity to fish: Cad Toxicity to daphnia a Persistence and deg Mobility in soil: No o Other adverse effect Section 13 These disposal guid regulations may be Section 14 UN/NA number: I Hazard class: Not	te potential hazards. on: RTECS #: Cadmium nitra Ecological information mium nitrate: Oncorhynchus n and other aquatic invertebrate dmium nitrate: Chlorella vulga radability: No data available data available s: Toxic to aquatic life with lon Disposal considerations telines are intended for the of different. Dispose of in according Transport information Not applicable s: applicable Signa Signa Sig	ate: EV1850000 nykiss (rainbow trr es: Cadmium nitra ris (Algae), EC50 Bioaccumu PBT and vF glasting effects. disposal of catal ordance with all ping name: N cing group: No	ate: Daphnia magna (= 1400 ug/L/5 days [b lative potential: No PvB assessment : No og-size quantities o local, state and fed ot Regulated ot Regulated ot applicable	24 hours water flea) EC50 = 1 iochemistry, chloroph data available o data available nly. Federal regula eral regulations or o	ations may a contract with	pply to empty c a licensed che	immobilization] ontainer. State and/or loca mical disposal agency.
Cadmium nitrate Listed Not listed Not listed Not listed Listed Not listed AvARNING - Cancer Reproductive Harm	Eyes: Contact with ey Signs and symptom procedures to minimiz Additional informatii Section 12 Toxicity to fish: Cad Toxicity to daphnia a Toxicity to algae: Ca Persistence and deg Mobility in soil: No o Other adverse effect Section 13 These disposal guid regulations may be Section 14 UN/NA number: I Hazard class: Not Exceptions: Not a Section 15	te potential hazards. on: RTECS #: Cadmium nitra Ecological information mium nitrate: Oncorhynchus n and other aquatic invertebrate dmium nitrate: Chlorella vulga radability: No data available data available s: Toxic to aquatic life with lon Disposal considerations delines are intended for the of different. Dispose of in accord Transport information Not applicable applicable Regulatory information	ate: EV1850000 mykiss (rainbow tra es: Cadmium nitra ris (Algae), EC50 Bioaccumu PBT and vF org lasting effects. disposal of catal ordance with all ping name: N cing group: No ERG Guide #	ate: Daphnia magna (= 1400 ug/L/5 days [b lative potential: No PVB assessment: No og-size quantities o local, state and fed ot Regulated ot Regulated ot applicable Not applicable	24 hours water flea) EC50 = 1 iochemistry, chloroph data available o data available nly. Federal regula eral regulations or o	ations may a contract with	pply to empty c a licensed che	immobilization] ontainer. State and/or loca mical disposal agency.
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Section 1

Identification

Page E1 of E2

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CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product	STRONTIUM NITRATE, 0.1 MOLAR SOLUTION	
Synonyms	Strontium Nitrate, Water Solution	
Section 2	Hazards identification	
GHS Classi Acute toxicit Skin irritation Eye irritation STOT-SE (C GHS Label H302: Harm H315: Cause H319: Cause	ns: Liver, Kidneys, Blood, Heart, Spleen, Central nervous system, Lungs fication: y, oral (Category 4) n (Category 2) n (Category 2A)	 Precautionary statement: P261: Avoid breathing mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER or doctor if you feel unwell. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Strontium nitrate		7732-18-5 10042-76-9	97.88% 2.12%	231-791-2 233-131-9		
Section 4	First aid measures					

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal prot	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Strontium nitrate	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and cher	nical properties					
Odor: No odo Odor threshol pH: Data not a Melting / Freezing Boiling point:	Id: Data not available.	(water) Relative density	tte (Water = 1): <1 solid/gas): Data not : ts: Lower / Upper: D e (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): App Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	: Data not available re: Data not available. ble. e
Section 10	Stability and react	tivity					
Chemical stat	bility: Stable avoid: Excessive temperatu		us polymerization: Vion.	Will not occur.			
Incompatible	materials: Reducing agents	, combustible materials, or	ganic materials, meta	ls and alloys.			
Hazardous de	ecomposition products: Nit	rogen oxides and carbon o	lioxide gas.				
Section 11	Toxicological info	rmation					
Carcinogenity NTP: No comp IARC: No com OSHA: No cor Ca Prop 65: TI Reproductive STOT-single of	ttagenicity: Data not availably: Data not available ponent of this product present ponent of this product present mponent of this product present his product does not contain a to toxicity: Data not available exposure: Data not available	t at levels greater than or e tt at levels greater than or o ent at levels greater than or any chemicals known to th e	equal to 0.1% is identi equal to 0.1% is iden	ified as probable, pos tified as a carcinogen	sible or confir or potential o	med human card carcinogen by OS	
Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syn coma. Exercis	ay cause respiratory irritation. rmful if swallowed. skin irritation. s serious eye irritation.	cause nausea, vomiting, d minimize potential hazards		thing, irregular heartb	eat, headach	e, drowsiness, di	zziness, bluish skin color and
Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syn coma. Exercis Additional inf Section 12	azard: Data not available Ith effects: ay cause respiratory irritation. rmful if swallowed. skin irritation. s serious eye irritation. mptoms of exposure: May se appropriate procedures to formation: RTECS #: WK98 Ecological inform	cause nausea, vomiting, d minimize potential hazards 300000 [Strontium nitrate]		thing, irregular heartb	eat, headach	e, drowsiness, di	zziness, bluish skin color and
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Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syr coma. Exercis Additional inf Section 12 Toxicity to fal Toxicity to fal Persistence a Mobility in soi Other adverse Section 13 These dispos	azard: Data not available Ith effects: ay cause respiratory irritation. rmful if swallowed. skin irritation. s serious eye irritation. mptoms of exposure: May se appropriate procedures to formation: RTECS #: WK98 Ecological informa- th: No data available uphnia and other aquatic invo gae: No data available und degradability: No data available e effects: An environmental Disposal conside	cause nausea, vomiting, d minimize potential hazards 300000 [Strontium nitrate] ation rertebrates: No data availa available Bioaccumu PBT and vi hazard cannot be excluded rations I for the disposal of catal of in accordance with all	able Ilative potential: No PvB assessment: No I in the event of unpro log-size quantities o	data available o data available fessional handling or nly. Federal regula	disposal. tions may a	pply to empty c	zziness, bluish skin color and ontainer. State and/or loca mical disposal agency.
Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syn coma. Exercis Additional inf Section 12 Toxicity to fish Toxicity to fish Toxicity to day Toxicity to day Persistence a Mobility in soi Other adverse Section 13 These dispos regulations m Section 14 UN/NA numi Hazard class Exceptions:	azard: Data not available Ith effects: ay cause respiratory irritation. rmful if swallowed. skin irritation. s serious eye irritation. mptoms of exposure: May se appropriate procedures to formation: RTECS #: WK96 Ecological inform. th: No data available uphnia and other aquatic inv gae: No data available and degradability: No data available e effects: An environmental I Disposal conside sal guidelines are intended may be different. Dispose of Transport inform. ber: Not applicable : Not applicable	cause nausea, vomiting, d minimize potential hazards 300000 [Strontium nitrate] ation rertebrates: No data availa available Bioaccumu PBT and vf hazard cannot be excluded rations I for the disposal of catal of in accordance with all ation Shipping name: N Packing group: No 2016 ERG Guide #	able VB assessment: No VB assessment: No d in the event of unpro log-size quantities o local, state and fed ot Regulated ot Regulated ot applicable	data available o data available fessional handling or nly. Federal regula	disposal. tions may a contract with	pply to empty c a licensed che	ontainer. State and/or loca
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Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syn coma. Exercis Additional inf Section 12 Toxicity to dis Toxicity to dis Toxicity to dis Persistence a Mobility in soi Other adverse Section 13 These dispos regulations m Section 14 UN/NA num Hazard class Exceptions: Section 15 A chemical is cor	azard: Data not available Ith effects: ay cause respiratory irritation. mful if swallowed. skin irritation. a serious eye irritation. mptoms of exposure: May se appropriate procedures to formation: RTECS #: WK98 Ecological inform th: No data available uphnia and other aquatic inv gae: No data available and degradability: No data a sil: No data available e effects: An environmental Disposal conside sal guidelines are intended hay be different. Dispose Transport inform ber: Not applicable s: Not applicable Not applicable Regulatory inform nsidered to be listed if the CAS m	cause nausea, vomiting, d minimize potential hazards 300000 [Strontium nitrate] ation vertebrates: No data availa available Bioaccumu PBT and vi hazard cannot be excluded rations I for the disposal of catal of in accordance with all ation Shipping name: N Packing group: No 2016 ERG Guide # nation umber for the anhydrous form	able Native potential: No PVB assessment: No PVB assessment: No in the event of unpro log-size quantities of local, state and fed ot Regulated ot Regulated ot applicable Not applicable is on the Inventory list.	data available o data available fessional handling or nly. Federal regula eral regulations or o Reportable Qua	disposal. itions may a contract with ntity: No	pply to empty c a licensed che Ma	ontainer. State and/or loc. emical disposal agency. arine pollutant: No
Aspiration ha Potential heal Inhalation: Ma Ingestion: Har Skin: Causes Eyes: Causes Signs and syn coma. Exercis Additional inf Section 12 Toxicity to dis Toxicity to dis Toxicity to dis Persistence a Mobility in soi Other adverse Section 13 These dispos regulations m Section 14 UN/NA num Hazard class Exceptions: Section 15 A chemical is cor	azard: Data not available Ith effects: ay cause respiratory irritation. rmful if swallowed. skin irritation. s serious eye irritation. mptoms of exposure: May se appropriate procedures to formation: RTECS #: WK96 Ecological inform: th: No data available uphnia and other aquatic inv gae: No data available and degradability: No data available e effects: An environmental Disposal conside sal guidelines are intended may be different. Dispose of Transport inform ber: Not applicable s: Not applicable : Not applicable Regulatory inform nsidered to be listed if the CAS m mponent	cause nausea, vomiting, d minimize potential hazards 300000 [Strontium nitrate] ation rertebrates: No data availa available Bioaccumu PBT and vf hazard cannot be excluded rations I for the disposal of catal of in accordance with all ation Shipping name: N Packing group: No 2016 ERG Guide # nation	able Ilative potential: No PVB assessment: No I in the event of unpro log-size quantities o local, state and fed ot Regulated ot Regulated ot applicable Not applicable	data available o data available fessional handling or nly. Federal regula eral regulations or o	disposal. tions may a contract with	pply to empty c a licensed che	ontainer. State and/or loca mical disposal agency.

terminations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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Product COBALT(II) NITRATE, 0.1 MOLAR SOLUTION			
Synonyms Cobaltous	Nitrate, Aqueous Solution			
Section 2 H	lazards identification			
Signal word: DANGER Pictograms: GHS07 / C Target organs: Kidneys C GHS Classification: Acute toxicity, oral (Cate Skin sensitization (Category Autagenicity (Category 2 Carcinogenicity (Category 2 Carcinogenicity (Category 2 Carcinogenicity (Category 2 Carcinogenicity (Category 2 Aquatic acute (Category 4 Aquatic chronic (Category 4 Bisso: May cause an alle H341: Suspected of caus H350: May cause cance H360: May damage fertil H400: Very toxic to aqua H410: Very toxic to aqua H410: Very toxic to aqua Hazards not otherwis	GHS08 / GHS09 s, Lungs, Thyroid (ory 1) (A) (P) (P) (P) (P) (P) (P) (P) (P) (P) (P		P201: Obtain P202: Do no P261: Avoid P264: Wash P270: Do no P272: Conta P273: Avoid P280: Wear P301+P330- doctor if you P302+P352: P333+P313: P305+P351- contact lenss P337+P313: P362+P364: P391: Collect P405: Store P501: Dispo	IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical attention. IF exposed or concerned: Get medical attention. P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove es, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash it before reuse. et spillage.
Section 3 C	composition / information on ingred	lients		
Chemical Name		CAS #	%	EINECS

Chemical Name		CAS #	%	EINECS	
Water Cobalt nitrate		7732-18-5 10026-22-9	98.17% 1.83%	231-791-2 233-402-1 (anhydrous)	
Section 4	First aid measures				

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Page E2 of E2 Section 7 Handling and storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Linits.	Cobalt and inorganic compounds, as Co	TWA: 0.02 mg/m ³ (A3)	TWA: 0.1 mg/m ³ metal dust and fume	TWA: 0.05 mg/m ³ metal dust and fume	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemical	properties					
	Data not available. lable. int: Approximately 0°C (32°F) (water) roximately 100°C (212°F) (water)	Flammability (Explosion limi Vapor pressur Vapor density Relative density	ate (Water = 1): <1 solid/gas): Data not its: Lower / Upper: I re (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): Appi : Complete in water.	Data not available r)	Auto-ignitie Decompos Viscosity: Molecular f	•	: Data not available I re: Data not available. ble. e
Section 10	Stability and reactivity						
Chemical stability Conditions to avo	y: Stable bid: Excessive temperatures w		ous polymerization:	Will not occur.			
Incompatible mat	1						
Hazardous decon	nposition products: Nitrogen	oxides.					
Section 11	Toxicological information	on					
Serious eye dama Respiratory or sk Germ cell mutage Carcinogenity: D NTP: No compone IARC classified: G OSHA: No compor Reproductive tox STOT-single expo	ritation: Data not available age/irritation: Data not available in sensitization: Data not available entity: Data not available bata not available ent of this product present at lev roup 2B: Possibly carcinogenic nent of this product present at lev icity: Data not available osure: Data not available	ilable els greater than or e to humans. [Cobalt	nitrate]		-		SHA.
Aspiration hazard Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact cau Eyes: Contact cau Signs and sympto possibly carcinoge	ul if inhaled.	priate procedures to			r prolonged inh	alation may cau	ise asthma. This substance is
Aspiration hazard Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact cau Eyes: Contact cau Signs and sympto possibly carcinoge Additional inform Section 12	Data not available ffects: ul if inhaled. li in ingested. ses irritation or acid burns. uses irritation or acid burns. oms of exposure: The substa enic to humans. Exercise appro- tation: RTECS #: QU7355500 Ecological information	priate procedures to [Cobalt nitrate]			r prolonged inh	alation may cau	ise asthma. This substance is
Aspiration hazard Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact cau Eyes: Contact cau Eyes: Contact cau Signs and symptr possibly carcinoge Additional inform Section 12 Toxicity to fish: L Toxicity to fish: L Toxicity to daphen Toxicity to algae: Persistence and c Mobility in soil: N Other adverse eff Section 13	d : Data not available offects: ul if inhaled. Il in ingested. uses irritation or acid burns. oms of exposure : The substant to humans. Exercise appro- to humans . Exercise	priate procedures to [Cobalt nitrate] cobalt nitrate] ates: LC50 (Fresh [Cobalt nitrate] e Bioaccume PBT and v cannot be excluded s	o minimize potential ha water) = 0.61 mg/L [Co ulative potential: No PvB assessment: No d in the event of unpro	obalt nitrate] data available o data available fessional handling o	disposal.		
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Aspiration hazard Potential health e Inhalation: Harmfu Ingestion: Harmfu Skin: Contact cau Eyes: Contact cau Eyes: Contact cau Signs and symptr possibly carcinoge Additional inform Section 12 Toxicity to fish: L Toxicity to fish: L Toxicity to daphen Toxicity to algae: Persistence and c Mobility in soil: N Other adverse eff Section 13 These disposal g regulations may Section 14 UN/NA number: Hazard class: N Exceptions: N Section 15	a: Data not available affects: ul if inhaled. il in ingested. ses irritation or acid burns. uses irritation or acid burns. soms of exposure: The substate anic to humans. Exercise approximation: RTECS #: QU7355500 Ecological information C50 (Fresh water) = 1.5 µg/L [0 and other aquatic inverteb LC50 (Fresh water) = 144 µg/L degradability: No data available vects: An environmental hazard Disposal consideration yuidelines are intended for th be different. Dispose of in a Transport information c: Not applicable Pa ot applicable Pa ot applicable 20 Regulatory information red to be listed if the CAS number formed to	priate procedures to [Cobalt nitrate] ates: LC50 (Fresh [Cobalt nitrate] e Bioaccume PBT and v cannot be excluded s e disposal of cata ccordance with all ipping name: N cking group: N [6 ERG Guide #	water) = 0.61 mg/L [Cd ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o l local, state and fed lot Regulated ot applicable Not applicable	azards. obalt nitrate] data available o data available fessional handling o only. Federal regul eral regulations or	r disposal. ations may ap	oply to empty c a licensed che	ontainer. State and/or loca mical disposal agency.

tance international Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

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Identification

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Product CALCIUM NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Calcium Nitrate, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS07 Target organs: Blood	Precautionary statement(s): P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical attention. P361+P364: Take off immediately all contaminated clothing and wash it before reus P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P312: Call a POISON CENTER or doctor if you feel unwell.

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / info	ormation on ingredients			
Chemical Name	CAS #	%	EINECS	
Water	7732-18-5	97.64%	231-791-2	
Calcium nitrate, tetrahydrate	13477-34-4	2.36%	233-332-1	
Section 4 First aid measures	;			

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Linits.	Calcium nitrate	None established	None established	None established	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemical pro	operties				
	Data not available. able. nt: Approximately 0°C (32°F) (water) oximately 100°C (212°F) (water)	Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not Explosion limits: Lower / Upper: Vapor pressure (mm Hg): 14 (water Vapor density (Air = 1): 0.7 (water Relative density (Specific gravity): App Solubility(ies): Complete in water.	Data not available er))	Decomposition Viscosity: Dat Molecular form	temperature n temperatu ta not availat nula: Mixtur	e: Data not available Ire: Data not available. ble. re
Section 10	Stability and reactivity					
Chemical stability: Conditions to avoi	: Stable id: Excessive temperatures to ca	Hazardous polymerization: ause evaporation.	Will not occur.			
incompatible mate	erials: Ammonia, hydrozine and	other reducing agents.				
Hazardous decom	position products: Nitrogen ox	ides.				
Section 11	Toxicological information	I.				
Respiratory or skii Germ cell mutager Carcinogenity: Da NTP: No componen IARC: No compone OSHA: No compone Reproductive toxic	nt of this product present at levels ant of this product present at level		ified as probable, pos	sible or confirmed	human card	5
STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: May be Ingestion: May be I Skin: Contact with Eyes: Contact with Signs and sympto not available. Exerc	harmful if inhaled. harmful if swallowed. skin may cause irritation. eyes may cause irritation.	•	and toxicological prope	erties have not be	een thorough	ly investigated. Specific data is
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

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Identification

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ZINC NITRATE, 0.1 MOLAR SOLUTION Product Synonyms Zinc Nitrate, Water Solution Section 2 Hazards identification Signal word: WARNING Precautionary statement: Pictograms: GHS07 P261: Avoid breathing mist/vapours/spray. Target organs: None known P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. GHS Classification: Remove contact lenses, if present and easy to do. Continue rinsing. Acute toxicity (Category 5) P337+P313: If eye irritation persists: Get medical attention. Skin irritation (Category 3) P332+P313: If skin irritation occurs: Get medical attention. Eye irritation (Category 2B) P312: Call a POISON CENTER or doctor if you feel unwell. STOT SE (Category 3) P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. GHS Label information: Hazard statement: P501: Dispose of contents/container to a licensed chemical disposal agency in H303: May be harmful if swallowed. accordance with local/regional/national regulations. H316: Causes mild skin irritation. H320: Causes eye irritation. H335: May cause respiratory irritation.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / infor	3 Composition / information on ingredients				
Chemical Name	CAS #	%	EINECS		
Water Zinc nitrate, hexahydrate	7732-18-5 10196-18-6	97.03% 2.97%	231-791-2 231-943-8		
Section 4 First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Linnes.	Zinc nitrate	Not established	Not established	Not established	

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirato)r.							
Section 9	Physical and chem	ical prope	rties					
• •	Data not available. lable. int: Approximately 0°C (32°F) (v roximately 100°C (212°F) (w	vater) Re	ammability (xplosion lim apor pressur apor density elative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: re (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	Data not available e: Data not available. e.
Section 10	Stability and reactive	vity						
Chemical stability Conditions to avo	 r: Stable sid: Excessive temperatur 	es which ca		ous polymerization: tion.	Will not occur.			
Incompatible mat phosphite.	erials: Combustible mate	rials, reducii	ng agents, or	ganic materials, meta	powders, stannous	chloride, phos	phorous, thiocyan	ates, cyanides, sodium hypo
Hazardous decon	position products: Nitro	ogen oxides	and toxic fun	nes of zinc oxides.				
Section 11	Toxicological inform	mation						
Carcinogenity: E NTP: No compone IARC: No compone OSHA: No compone Reproductive tox STOT-single expo STOT-repeated ex Aspiration hazard Potential health ex Inhalation: Inhalat Ingestion: Ingestic Skin: Contact with Eyes: Contact with Signs and sympte	nt of this product present a ent of this product present nent of this product presen icity: Data not available osure: Data not available cposure: Data not availab d: Data not available	at levels gre at levels gre t at levels gr ble roat. ps, abdomir pain. ain and blurr se appropria 5000 [Zinc r	eater than or reater than o nal pain, blue ed vision. ate procedure	equal to 0.1% is ident r equal to 0.1% is iden lips, fingernails and s es to minimize potentia	ified as probable, po tified as a carcinoge kin, nausea.	ssible or confir	med human carci	• •
	•							
Toxicity to algae: Persistence and o Mobility in soil: N Other adverse eff	ia and other aquatic inve No data available Iegradability: No data av Io data available ects: An environmental ha	ailable azard canno	Bioaccum PBT and v	ulative potential: No PvB assessment: No	o data available	r disposal.		
Section 13	Disposal considera							
	uidelines are intended f be different. Dispose of Transport informa t	in accorda						ntainer. State and/or loca nical disposal agency.
UN/NA number Hazard class: Exceptions: N Section 15		Packing 2016 ER	group: N	lot Regulated ot applicable Not applicable	Reportable Qua	antity: Yes	Marine pol	lutant: No
	red to be listed if the CAS nur		nhydrous form	is on the Inventory list.				
Compo			TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65

Component CERLCA (RQ) CA Prop 65 This product does not contain Zinc nitrate (as solid) Listed 1000 lbs (454 kg) Not listed Not listed Not listed any chemicals known to the State of California to cause cancer or reproductive toxicity. Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Draduat

Identification

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"cutting edge science for t	he classroom"

ALLIMINUM NITRATE A 1 MOLAR SOLUTION

Product	ALUMINUM NITRATE, 0.1 MOLAR SOLUTION	
Synonyms	Aluminum Nitrate, Water Solution	
Section 2	Hazards identification	
GHS Classifi Acute toxicity, Skin irritation Eye irritation (GHS Label ir H303: May be H315: Causes	GHS07 s: Liver, Kidneys, Blood cation: , oral (Category 5)	Precautionary statement(s): P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P302+P352: IF ON SKIN: Wash with plenty of soap and water P332+P313: If skin irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information of	on ingredients		
Chemical Name		CAS #	%	EINECS
Water Aluminum nitrate,	nonahydrate	7732-18-5 7784-27-2	96.25% 3.75%	231-791-2 236-751-8 (anhydrous CAS # 13473-90-0)
Section 4	First aid measures			

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Aluminum nitrate	None established.	None established.	None established.		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemi	cal properties					
Odor: No odor. Odor threshold: pH: Data not ava Melting / Freezing p	point: Approximately 0°C (32°F) (wa pproximately 100°C (212°F) (wa	Flammability (Explosion limi Vapor pressur ter) Vapor density Relative density	tte (Water = 1): <1 solid/gas): Data not ts: Lower / Upper: I e (mm Hg): 14 (wate (Air = 1): 0.7 (water) (Specific gravity): Appi Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular		: Data not available re: Data not available. ele. e
Section 10	Stability and reactiv	ity					
Chemical stabili Conditions to av	ity: Stable void: Excessive temperature		us polymerization:	Will not occur.			
Incompatible m	aterials: Reducing agents, c	organic materials.					
Hazardous deco	omposition products: Nitrog	gen oxides.					
Section 11	Toxicological inform	nation					
Germ cell mutat Carcinogenity: NTP: No compor IARC: No compor OSHA: No compor Reproductive to STOT-single exp STOT-repeated	skin sensitization: Data not genicity: Data not available Data not available nent of this product present a onent of this product present onent of this product present oxicity: Data not available posure: Data not available exposure: Data not available	t levels greater than or e at levels greater than or at levels greater than or	equal to 0.1% is ident	ified as probable, pos	sible or confir	med human card	
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and symp not available.	be harmful if inhaled. be harmful if swallowed. e irritation.	es to minimize potential l		and toxicological prop	erties have no	ot been thorough	ly investigated. Specific data
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and symp not available. Ex Additional infor Section 12	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. e irritation. ptoms of exposure: To the h xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati	es to minimize potential I 0000 [Aluminum nitrate]		and toxicological prop	erties have no	ot been thorough	ly investigated. Specific data
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and symmer not available. Ex Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to daph Toxicity to algae Persistence and Mobility in soil: Other adverse e Section 13 These disposal	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. e irritation. ptoms of exposure: To the la xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati No data available onia and other aquatic inver e: No data available d degradability: No data ava No data available effects: An environmental ha Disposal considera I guidelines are intended for	es to minimize potential I 1000 [Aluminum nitrate] 1000 tebrates: No data availa 1111 1111 1111 1111 1111 1111 1111	hazards. able PvB assessment: No I in the event of unpro log-size quantities of	data available o data available fessional handling or only. Federal regula	disposal. tions may a	oply to empty c	ontainer. State and/or loc
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and symp not available. Ex Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to fish: Toxicity to algae Persistence and Mobility in soil: Other adverse e Section 13 These disposal regulations may	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. se irritation. ptoms of exposure: To the la xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati No data available onia and other aquatic inver e: No data available d degradability: No data ava No data available effects: An environmental ha Disposal considera I guidelines are intended for y be different. Dispose of	es to minimize potential h 1000 [Aluminum nitrate] ion tebrates: No data availa ailable Bioaccumu PBT and vi zard cannot be excluded tions or the disposal of catal in accordance with all	hazards. able PvB assessment: No I in the event of unpro log-size quantities of	data available o data available fessional handling or only. Federal regula	disposal. tions may a	oply to empty c	ontainer. State and/or loc
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and symp not available. Ex Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to algae Persistence and Mobility in soil: Other adverse e Section 13 These disposal regulations may Section 14 UN/NA numbe	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. e irritation. ptoms of exposure: To the l xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati No data available onia and other aquatic inver e: No data available d degradability: No data ava No data available offects: An environmental ha Disposal considera I guidelines are intended for y be different. Dispose of Transport informati er: Not applicable	es to minimize potential h 1000 [Aluminum nitrate] ion tebrates: No data availa ailable Bioaccumu PBT and vi zard cannot be excluded tions or the disposal of catal in accordance with all	able Idative potential: No PvB assessment: No Identify assessment: No log-size quantities of local, state and fed ot Regulated ot Regulated ot applicable	data available o data available fessional handling or only. Federal regula	disposal. tions may a contract with	oply to empty c a licensed che	ontainer. State and/or loc
Potential health Inhalation: May Ingestion: May b Skin: May cause Eyes: May cause Signs and sym not available. Ex Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to daph Toxicity to dap	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. e irritation. ptoms of exposure: To the l xercise appropriate procedure rmation: RTECS #: BD1050 Ecological information No data available nnia and other aquatic inver e: No data available d degradability: No data avai No data available d degradability: No data avai No data available ffects: An environmental ha Disposal considerat I guidelines are intended for y be different. Dispose of Transport information er: Not applicable Not applicable Regulatory information	es to minimize potential i 1000 [Aluminum nitrate] 1000 [Aluminum nit	hazards. able VB assessment : No VB assessment : No d in the event of unpro log-size quantities of local, state and fed ot Regulated ot Regulated ot applicable Not applicable	data available o data available fessional handling or only. Federal regula eral regulations or o	disposal. tions may a contract with	oply to empty c a licensed che	ontainer. State and/or loc mical disposal agency.
Potential health Inhalation: May Ingestion: May Is Skin: May cause Eyes: May cause Signs and symp not available. Eye Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to algae Persistence and Mobility in soil: Other adverse e Section 13 These disposal regulations may Section 14 UN/NA number Hazard class: Exceptions: Section 15 A chemical is consid	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. e irritation. ptoms of exposure: To the l xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati No data available nia and other aquatic inver e: No data available d degradability: No data ava No data available d degradability: No data ava No data available effects: An environmental ha Disposal considerat I guidelines are intended for y be different. Dispose of Transport informati er: Not applicable Not applicable Not applicable Regulatory informati	es to minimize potential I 1000 [Aluminum nitrate] 1000 [Aluminum nitrate] 1000 [Aluminum nitrate] 1000 [Aluminum nitrate] 1000 [Bloaccumu PBT and vf 2ard cannot be excluded 1000 [Bloaccumu PBT and vf 2ard cannot be excluded 1000 [Bloaccumu PBT and vf 2016 canton be excluded 1000 [Bloaccumu PBT and vf 2016 [Bloaccumu 2016 ERG Guide # 1000 [Bloaccumu 2016 ERG Guide #	able Idative potential: No 2vB assessment: No 2vB assessment: No 1 in the event of unpro- log-size quantities of local, state and fed ot Regulated ot Regulated ot applicable Not applicable is on the Inventory list.	data available o data available ifessional handling or only. Federal regula eral regulations or o Reportable Quar	disposal. tions may a contract with ntity: No	oply to empty c a licensed che Ma	ontainer. State and/or loc mical disposal agency. trine pollutant: No
Potential health Inhalation: May Ingestion: May Is Skin: May cause Eyes: May cause Signs and symp not available. Eye Additional infor Section 12 Toxicity to fish: Toxicity to fish: Toxicity to algae Persistence and Mobility in soil: Other adverse e Section 13 These disposal regulations may Section 14 UN/NA number Hazard class: Exceptions: Section 15 A chemical is consid	n effects: be harmful if inhaled. be harmful if swallowed. e irritation. se irritation. ptoms of exposure: To the l xercise appropriate procedure rmation: RTECS #: BD1050 Ecological informati No data available nnia and other aquatic inver e: No data available d degradability: No data avai No data available of degradability: No data avai No data available offects: An environmental ha Disposal considerat I guidelines are intended for y be different. Dispose of Transport informati er: Not applicable Not applicable Not applicable Regulatory informati idered to be listed if the CAS num ponent	es to minimize potential i 1000 [Aluminum nitrate] 1000 [Aluminum nit	hazards. able VB assessment : No VB assessment : No d in the event of unpro log-size quantities of local, state and fed ot Regulated ot Regulated ot applicable Not applicable	data available o data available fessional handling or only. Federal regula eral regulations or o	disposal. tions may a contract with	oply to empty c a licensed che	ontainer. State and/or loca mical disposal agency.

on from al s. NTI ım, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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Section 1

Identification

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CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

For laboratory and industrial use only. Not for drug, food or household use.

Product CHROMIUM(III) NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Chromic Nitrate, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS07 Target organs: Respiratory tract, Liver, Kidneys	Precautionary statement: P261: Avoid breathing mist/vapours/spray. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P391: Collect spillage. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P333+P313: If skin irritation or rash occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Chromium nitrate		7732-18-5 7789-02-8	96% 4%	231-791-2 236-921-1 [anhydrous]		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

ERG: Emergency Response Guidebook.

Form 06/2015

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Chromium(III) inorganic compounds, as Cr	TWA: 0.5 mg/m ³ (A4)	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approvou roopiiatori	•						
Section 9	Physical and chem	ical properties					
	ata not available. ble. :: Approximately 0°C (32°F) (v ximately 100°C (212°F) (w	Atter) Relative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: 1 re (mm Hg): 14 (wate r (Air = 1): 0.7 (water) r (Specific gravity): App b: Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	: Data not available re: Data not available. le.
ection 10	Stability and reacti	vity					
Chemical stability:	Stable	- Hazard	ous polymerization:	Will not occur.			
Conditions to avoid	d: Excessive temperatur	es.					
•	rials: Aluminium and ma			uch as esters and et	hers. May igni	ite organic materi	als on contact.
lazardous decom	oosition products: Nitro	ogen oxides, chromium (dust and/or fume.				
Section 11	Toxicological infor	mation					
	al-rat LD50: 3250 mg/kg						
OSHA: No compone CA Prop 65: A WAI reproductive harm. Reproductive harm. Reproductive toxics STOT-repeated exp STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: Inhalatic Ingestion: Ingestior Skin: Contact with Signs and symptor	city: Data not available sure: Data not available posure: Data not available pata not available fects: on may cause cough and a causes abdominal pain skin causes irritation. eyes causes serious eye ms of exposure: Exerci	t at levels greater than on n expose you a chemicat ole sore throat. diarrhea, nausea, and irritation. se appropriate procedur	or equal to 0.1% is ider al, Chromium [hexavale vomiting.	ntified as a carcinoge	en or potential o	carcinogen by OS	
Additional informa Section 12	tion: RTECS #: Data n Ecological informa						
Toxicity to algae: N Persistence and de Mobility in soil: No	a and other aquatic inve lo data available egradability: No data av	ailable Bioaccum PBT and v	ulative potential: No /PvB assessment: N	o data available	r disposal.		
Section 13	Disposal consideration	ations					
							ontainer. State and/or loo mical disposal agency.
ection 14	Transport informa		,				
UN/NA number:	Not applicable	Shipping name:	Not Regulated				
Hazard class: N		Packing group:	Not applicable	Reportable Qua	antity: No	Ма	rine pollutant: No
Exceptions: No	••	2016 ERG Guide #	Not applicable				
ection 15	Regulatory informa						
chemical is considere Compon	ed to be listed if the CAS nu	mber for the anhydrous forr TSCA	· ·	RCRA code	DSL	NDSL	CA Prop 65
Compon Chromium nitrate (C		Listed	CERLCA (RQ) Not listed	Not listed	Listed	Not listed	▲ WARNING -Cancer a Reproductive Harm - www.P65Warnings.ca.g
Section 16	Other information						
The information contain dent determinations of	ned herein is furnished with suitability and completeness ency for Research on Cance	s of information from all sou	rces to assure proper use	of these materials and	the safety and h	nealth of employees	ered by them and must make inc . NTP: National Toxicology Pro osure, RE: Repeated Exposure,

Section 1	Identification			Page E1 of F
	vating Science [®] by A tting edge science for the cla		ester Street 14414-9409 -6177	CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	FERRIC NITRATE, 0.1 MOLAR SOL	UTION		
Synonyms	Iron(III) Nitrate, Water Solution			
Section 2	Hazards identification			
Pictograms Target orga GHS Classi Acute toxicit Skin irritation Eye irritation GHS Label i H303: May b H315: Cause H320: Cause	ns: Blood		P280: Wear prote P302+P352: IF O P305+P351+P33 contact lenses, if P312: Call a POIS P332+P313: If ski P337+P313: If ski	Ratement(s): Is thoroughly after handling. Active gloves/protective clothing/eye protection/face protection. N SKIN: Wash with plenty of soap and water 8: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove present and easy to do. Continue rinsing. SON CENTER or doctor if you feel unwell. In irritation occurs: Get medical attention. e irritation persists: Get medical attention. e off contaminated clothing and wash before reuse.

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Compositio	n / information on ingredients		
Chemical Name	CAS #	%	EINECS
Water Ferric nitrate, nonahydrate	7732-18-5 7782-61-8	95.96% 4.04%	231-791-2 233-899-5 (anhydrous CAS # 10421-48-4)
Section 4 First aid me	asures		

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linnes.	Iron salts, soluble, as Fe	TWA: 1 mg/m ³	None	TWA: 1 mg/m ³		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemi							
	Data not available. lable. nt: Approximately 0°C (32°F) (wa roximately 100°C (212°F) (wa	ater) Relative density	rate (Water = 1): <1 (solid/gas): Data not a nits: Lower / Upper: D ure (mm Hg): 14 (water y (Air = 1): 0.7 (water) y (Specific gravity): Appro): Complete in water.	ata not available)	Auto-ignitic Decomposi Viscosity: Molecular f	•	e: Data not available u re: Data not available ble. re	9.
Section 10	Stability and reactiv	vity						
Chemical stability Conditions to avo	r: Stable id: Excessive temperature		ous polymerization: V	Vill not occur.				
Incompatible mate phosphite.	erials: Aluminum, cyanide	s, phosphorous, stanno	ous chloride, thiocyanate	e. Oxidizable materia	Ils including su	lfur, organic ma	aterials and sodium hy	po-
Hazardous decom	position products: Nitrog	gen oxides.						
Section 11	Toxicological inform	nation						
Respiratory or ski Germ cell mutage Carcinogenity: Da NTP: No componen IARC: No componen OSHA: No component	nt of this product present a ent of this product present a nent of this product present icity: Data not available	t available t levels greater than or at levels greater than or	r equal to 0.1% is identif	ied as probable, pos	sible or confirn	ned human card	0 ,	
Aspiration hazard Potential health e Inhalation: May be Ingestion: May be Skin: Contact with Eyes: Contact with Signs and sympto not available. Exer	(posure: Data not availabl I: Data not available	best of our knowledge t es to minimize potential		nd toxicological prope	erties have not	been thorough	nly investigated. Speci	fic data
Aspiration hazard Potential health e Inhalation: May be Ingestion: May be Skin: Contact with Eyes: Contact with Signs and sympto not available. Exer Additional inform Section 12	posure: Data not available ffects: harmful if inhaled. harmful if swallowed. skin may cause irritation. ores may cause irritation. ores of exposure: To the te rricise appropriate procedure ation: RTECS #: NO7175 Ecological informati	best of our knowledge t es to minimize potential 5000 [Ferric nitrate]		nd toxicological prope	erties have not	been thorough	nly investigated. Speci	fic data
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dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

GENERAL STORAGE CODE GREEN

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Section 1

Identification

"cutting edge science for the classroom"

Innovating Science[®] by Aldon Corporation 221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 **CHEMTREC 24 Hour Emergency** Phone Number (800) 424-9300 For laboratory and industrial use only.

Not for drug, food or household use.

Product	BARIUM NITRATE, 0.1 MOLAR SOLUTION	
Synonyms	Barium Nitrate, Aqueous Solution	
Section 2	Hazards identification	
Pictograms	d: WARNING :: None required I ns: Central nervous system, Kidneys.	Precautionary statement: P304+P312: IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
	i fication: ty, oral (Category 5) ty, inhalation (Category 5)	
H303: May I	information: Hazard statement: be harmful if swallowed. be harmful if inhaled.	
Hazards n	ot otherwise classified.	

Hazards not otherwise classified: Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Barium nitrate		7732-18-5 10022-31-8	97.39% 2.61%	231-791-2 233-020-5		
Section 4	First aid measures					

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Barium and soluble compounds, as Ba	TWA: 0.5 mg/m ³ (A4)	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator

approved respirator.									
Section 9	Physical and chemical pro	perties							
	ata not available. ble. : Approximately 0°C (32°F) (water) ximately 100°C (212°F) (water)	Flammability Explosion lim Vapor pressur Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: re (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available er)	Auto-igniti Decompos Viscosity: Molecular		: Data not available re: Data not available. le. e		
Section 10	Section 10 Stability and reactivity								
Conditions to avoid Incompatible mater	Section for Stability and reactivity Chemical stability: Stability and reactivity Conditions to avoid: Excessive temperatures which cause evaporation. Incompatible materials: Barium oxides, magnesium and zinc, reducing agents and combustible materials. Hazardous decomposition products: Nitrogen oxides, barium oxide, barium dust and/or fume.								
Section 11	Toxicological information								
Skin corrosion/irrit Serious eye damag Respiratory or skin Gern cell mutagen Carcinogenity: Dat NTP: No componen IARC: No componen OSHA: No componen Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: Inhalatio Ingestion: Ingestion Skin: Contact with s Eyes: Contact with	Acute toxicity: Oral-rat LD50: 355 mg/kg [Baryum nitrate] Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation may cause cough, shortness of breath, sore throat. Ingestion: Ingestion causes excessive salivation, abdominal cramps, abdominal pain, diarrhea, nausea, vomiting, shortness of breath, weakness. Skin: Contact with skin may cause irritation. Eyes: Contact with eyes causes irritation. Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards.						SHA.		
Section 12	Ecological information								
Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (water flea, age <24 neonate), EC50 = 0.512 mM/24 hours [Baryum nitrate] Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available PBT and VPVB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.									
Section 13	Disposal considerations								
	idelines are intended for the d different. Dispose of in acco Transport information								
UN/NA number: Hazard class: Not Exceptions: Not	ot applicable Packi	ing name: N ng group: N ERG Guide #	•	Reportable Qua	ntity: No	Ма	rine pollutant: No		
Section 15	Regulatory information								
A chemical is considere Compone	d to be listed if the CAS number for the	e anhydrous form	is on the Inventory list.	RCRA code	DSL	NDSL	CA Prop 65		
Barium nitrate		Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.		
Section 16	Other information								
The information contain	ed herein is furnished without warran	ty of any kind En	nlovers should use this i	nformation only as a sur	nnlement to othe	r information dathe	and by them and must make indepen		

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015