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Section 1

Identification

### INNOVATING SCIENCE<sup>®</sup> by Aldon 221 Rev Avon. N

"Cutting edge science for the classroom"

Aldon 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 COPPER(II) SULFATE, 1.0 MOLAR SOLUTION	
Synonyms Cupric Sulfate, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS07 / GHS09 Target organs: Liver, Kidneys, Lungs, Spleen.	<ul> <li>Precautionary statement:</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P270: Do not eat, drink or smoke when using this product.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.</li> <li>P302+P352: IF ON SKIN: Wash with plenty of water and soap.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P332+P313: If skin irritation occurs: Get medical attention.</li> <li>P332+P344: Take off contaminated clothing and wash it before reuse.</li> <li>P391: Collect spillage.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on	ingredients			
Chemical Name		CAS #	%	EINECS	
Water Cupric sulfate, penta	ahydrate	7732-18-5 7758-99-8	75.03% 24.97%	231-791-2 231-847-6 (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 SEVERE 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: 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 prote	ction		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Copper, dusts and mists, as Cu	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>

**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, blue 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

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Reducing agents, acetylene or nitromethane, magnesium, strong bases, alkalines, phosphates, hydrazine, zirconium. Can corrode aluminum, steel and iron.

Hazardous decomposition products: Oxides of sulfur and copper fumes.

### Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 300 mg/kg [Copper sulfate anhydrous] 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.
- 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.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

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 cause irritation to the mucous membranes and upper respiratory tract.

Ingestion: Ingestion can cause irritation to the digestive tract and abdominal pain.

Skin: Contact with skin causes slight irritation. Excessive exposure may cause allergic dermatitis. May cause irritation or burns on wet skin.

Eyes: Can cause severe irritation and may result in irreversible eye damage.

Signs and symptoms of exposure: Note to physician: Probable mucosal damage may contradict the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed. Wilson's disease can be aggravated by excessive exposure. Symptoms include nausea, vomiting, gastrointestinal pain, diarrhea, dizziness, jaundice, and general debility.

Additional information: RTECS #: GL8900000 [Copper sulfate pentahydrate]

### Section 12 Ecological information

Toxicity to fish: Salmo gairdneri (fish, estuary, fresh water), LC50 = < 0.75-0.84 mg/L [Copper sulfate anhydrous]

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available Persistence and degradability: No Mobility in soil: 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

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

UN/NA number: Not applicable Hazard class: Not applicable Exceptions: Not applicable	Shipping name:Not RegulatedPacking group:Not applicable2020 ERG Guide #Not applicable	Reportable Quantity: No	Marine pollutant: No
Section 15 Regulatory informa	tion		
A chemical is considered to be listed if the CAS num	the physical sector is on the Inventory list		

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Cupric sulfate	Listed	10 lbs (4.54 kg)	Not listed	Not 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 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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Product COPPER(II) NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Cupric Nitrate, Water Solution	
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<ul> <li>Signal word: WARNING</li> <li>Pictograms: GHS07 / GHS09</li> <li>Target organs: Liver</li> <li></li></ul>	<ul> <li>Precautionary statement:</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337+P313: If eye irritation persists: Get medical attention.</li> <li>P302+P352: IF ON SKIN: Wash with plenty of water and soap.</li> <li>P332+P313: If skin irritation occurs: Get medical attention.</li> <li>P362+P364: Take off contaminated clothing and wash it before reuse.</li> <li>P391: Collect spillage.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

### 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, trihyd	frate	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.

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Exposure Linits.	Copper, dusts & mists, as Cu	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>

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Section 9	Physical and chem	nical properties	\$					
	Data not available. able. nt: Approximately 0°C (32°F) (v roximately 100°C (212°F) (v	(water) Relative	ration rate (Water = 1): <1 ability (solid/gas): Data not sion limits: Lower / Upper: I pressure (mm Hg): 14 (wate density (Air = 1): 0.7 (water) e density (Specific gravity): App lity(ies): Complete in water.	Data not available r)	Auto-ignit Decompo Viscosity: Molecular	•	e: Data not available ure: Data not available ble. re	9.
Section 10	Stability and reacti	tivity						
Chemical stability Conditions to avo	: Stable id: Excessive temperatu		Hazardous polymerization: evaporation.	Will not occur.				
ncompatible mate	erials: Strong oxidizing a	agents, aluminum	n cyanides, esters, sodium hyp	ophosphite, stannous	chloride and	thiocyanates.		
Hazardous decom	position products: Nitro	rogen oxides, cop	oper oxides and copper dust.					
Section 11	Toxicological infor	rmation						
OSHA: No compon Ca Prop 65: This p <b>Reproductive toxi</b>	nent of this product preser roduct does not contain a	nt at levels greate	r than or equal to 0.1% is iden er than or equal to 0.1% is ide own to the State of California	ntified as a carcinoge	n or potential	carcinogen by OS		
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STOT-repeated ex Aspiration hazard Potential health el Inhalation: Harmful Ingestion: Harmful Skin: Contact with Eyes: Contact with Signs and sympto procedures to minin Additional inform: Section 12 Toxicity to fish: N Toxicity to fish: N 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	sure: Data not available cosure: Data not available ffects: I finaled. I finaled. I fiswallowed. skin causes irritation and eyes causes irritation and eyes causes irritation and neyes causes irritation and the eyes cause irritation and the eyes and the eyes and the eyes and the eyes and the eyes and	d/or burns. nd/or burns. rial is extremely of 75000 [Cupric nit ation rertebrates: No d wailable Bit PE hazard cannot be rations for the disposa of in accordance ation Shipping na Packing gro 2020 ERG G nation umber for the anhyo	rate] lata available oaccumulative potential: No BT and vPvB assessment: No excluded in the event of unpr I of catalog-size quantities e with all local, state and feo ame: Not Regulated oup: Not applicable Guide # Not applicable	o data available lo data available ofessional handling o only. Federal regul deral regulations or	disposal. ations may a contract with	ipply to empty c a licensed che	container. State and/ emical disposal agen	/or loc ncy. 0 55 sontain o the St

Form 06/2015

# **GENERAL STORAGE CODE GREEN**

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Identification

### **E**<sup>®</sup> by Aldon INNOVATING SCIENC 221 Rochester Street

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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.

cautionary statement: 11: Obtain special instructions before use. 12: Do not handle until all safety precautions have been read and understood. 11: Avoid breathing mist/vapours/spray. 14: Wash hands thoroughly after handling. 12: Contaminated work clothing should not be allowed out of the workplace.
<ul> <li>Obtain special instructions before use.</li> <li>Do not handle until all safety precautions have been read and understood.</li> <li>Avoid breathing mist/vapours/spray.</li> <li>Wash hands thoroughly after handling.</li> </ul>
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<ul> <li>3: Avoid release to the environment.</li> <li>30: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>32: Wear respiratory protection.</li> <li>32: P332: IF ON SKIN: Wash with plenty of water and soap.</li> <li>33: P313: If skin irritation or rash occurs: Get medical attention.</li> <li>52: P364: Take off contaminated clothing and wash it before reuse.</li> <li>52: P340: IF INHALED: Remove person to fresh air and keep comfortable for athing.</li> <li>12: P311: If experiencing respiratory symptoms: Call a POISON CENTER or tor.</li> <li>55: P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove tact lenses, if present and easy to do. Continue rinsing.</li> <li>57: P313: If eye irritation persists: Get medical attention.</li> <li>11: Collect spillage.</li> <li>15: Store locked up.</li> <li>11: Dispose of contents/container to a licensed chemical disposal agency in ordance with local/regional/national regulations.</li> </ul>

### Hazards not otherwise classified:

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

Section 3	Composition / information or	n ingredients			
Chemical Name		CAS #	%	EINECS	
Water Nickel nitrate, hexał	nydrate	7732-18-5 13478-00-7	97.09% 2.91%	231-791-2 236-068-5 [CAS # 13138-45-9]	
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. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. 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 CAUSE AN ALLERGIC SKIN REACTION. 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.

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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.	Nickel, soluble compounds, as Ni	TWA: 0.1 mg/m <sup>3</sup> (A4) inhalable fraction	TWA: 1 mg/m <sup>3</sup>	TWA: 0.015 mg/m <sup>3</sup> as Ni	

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 p	operties					
	colorless liquid. ta not available. le. Approximately 0°C (32°F) (water) kimately 100°C (212°F) (water)	Evaporation r Flammability Explosion lim Vapor pressur Vapor density Relative density	ate (Water = 1): <1 solid/gas): Data not i its: Lower / Upper: E 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 <b>re:</b> Data not available. <sub>I</sub> le.
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoid	Stable : Excessive temperatures whi		tion.	Will not occur.			
Incompatible mater stannous chloride an	ials: Strong reducing materials d thiocyanates.	s, aluminum, boro	n phosphide, cyanides	, esters and other co	mbustibles, pł	nospham, phosph	norous, sodium hypochlorite,
Hazardous decomp	osition products: Nitrogen or	ides and nickel m	etal dust or fumes.				
Section 11 Acute toxicity: Data	Toxicological information	1					
Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: Known to be a IARC classified: Grou OSHA: Data not ava CA Prop 65: M WAR reproductive toxici STOT-single exposis STOT-repeated exp Aspiration hazard: Potential health effi Inhalation: May be h Skin: May cause an Eyes: Causes seriou Signs and sympton or repeated exposure	human carcinogen (Nickel com up 1: Carcinogenic to humans i lable. NING! :This product can exposi- ity: Data not available ure: Data not available osure: Data not available Data not available pats: armful if inhaled. May cause a armful if swallowed. allergic skin reaction. us eye irritation.	able pounds). Nickel compound se you to nickel so llergy or asthma s causing genetic o ures to minimize	Juble compounds, whi	difficulties if inhaled.			icer, birth defects, and age to organs through prolonged
Section 12	Ecological information						
Toxicity to algae: No Persistence and de Mobility in soil: No	<b>and other aquatic invertebra</b> o data available <b>gradability:</b> No data available	Bioaccum PBT and v	ulative potential: No PvB assessment: No	o data available	<sup>-</sup> disposal.		
Section 13	Disposal considerations						
	delines are intended for the different. Dispose of in acc						ontainer. State and/or local
Section 14	Transport information						
UN/NA number:	•	ping name: N	lot Regulated				
Hazard class: No		king group: N		Reportable Qua	ntity: Yes	Ма	rine pollutant: No
Exceptions: Not			Not applicable				P
Section 15	Regulatory information						
	d to be listed if the CAS number for	the anhydrous form	is on the Inventory list.				
Compone		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Nickel nitrate		Listed	100 lbs (45.4 Kg)	D001	Listed	Not listed	▲ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
Section 16	Other information						
The information contain	ed herein is furnished without warra	anty of any kind. En	ployers should use this in	nformation only as a su	pplement to othe	er information gathe	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

Page E1 of E2

Section 1

Identification

### INNOVATING SCIENCE® by Aldon 221 Roc Avon, N

"Cutting edge science for the classroom"

Aldon 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 LEAD NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Lead Dinitrate, Aqueous Solution	
Section 2 Hazards identification	
Signal word: DANGER         Pictograms: GHS08 / GHS09         Target organs: Blood, Central nervous system         Image: Signal word: David Category Signal Category Signal Word: Category 2B)         Acute toxicity, Oral (Category 5)         Eye irritation (Category 2B)         Acute toxicity, Inhalation (Category 5)         Reproductive toxicity (Category 1A)         STOT-RE (Category 2)         Acute aquatic toxicity (Category 1)         Chronic aquatic toxicity (Category 1)         GHS Label information: Hazard statement(s):         H303 + H333: May be harmful if swallowed or if inhaled         H320: Causes eye irritation.         H360: May damage fertility or the unborn child.         H373: May cause damage to organs through prolonged or repeated exposure.         H410: Very toxic to aquatic life with long lasting effects.	<ul> <li>Precautionary statement(s):</li> <li>P201: Obtain special instructions before use.</li> <li>P202: Do not handle until all safety precautions have been read and understood.</li> <li>P260: Do not breathe mist/vapours/spray.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P270: Do not eat, drink or smoke when using this product.</li> <li>P271: Use only outdoors or in a well-ventilated area.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337+P313: If eye irritation persists: Get medical attention.</li> <li>P308+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P308+P313: IF exposed or concerned: Get medical attention.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

Health hazards not otherwise classified (HHNOC) - Not Known

# Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on	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 <sup>3</sup> (A3)	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	

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 chemical pr	operties					
	teristic odor. Data not available. able. nt: Approximately 0°C (32°F) (water) oximately 100°C (212°F) (water)	Flammability ( Explosion limi Vapor pressur Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not a its: Lower / Upper: E re (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appr : 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 reactivity						
Chemical stability Conditions to avo	: Stable id: Excessive temperatures whic		tion.	Will not occur.			
Incompatible mate	erials: Ammonium thiocyanate, p	owdered carbon,	, lead hypophosphite.				
Hazardous decom	position products: Lead oxides	and nitrogen oxi	ides.				
Section 11	Toxicological information						
Carcinogenity: D NTP: (R) Reasonal IARC classified: Gr OSHA: No compor CA Prop 65: A WA birth defects or oth Reproductive toxi	bly anticipated to be a human car oup 2A: Probably carcinogenic to lent of this product present at leve RNING! : This product can expose r reproductive harm. city: Data not available	humans. [Lead r els greater than o se you to chemica	nitrate] r equal to 0.1% is iden als including Lead and	lead compounds, whi	ich are knowr	n to the State of C	California to cause cancer and
STOT-repeated ex Aspiration hazard Potential health er Inhalation: Harmful Ingestion: Harmful Skin: Harmful if ab Eyes: Causes eye Signs and sympto by any route can cc "lead line" on the g	I if inhaled. if swallowed. sorbed through skin. Causes skir irritation. <b>oms of exposure:</b> Lead is a cum ause headache, vomiting, dizzine ums, metallic taste, definite loss o	i irritation. ulative poison an ss, cyanosis, dec of appetite, insom	id exposure to even sn preased blood pressure	nall amounts can rais	e the body's o tory paralysis	content to toxic le a. Acute poisonin	evels. Nitrates entering the boo g can lead to muscle weaknes
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STOT-repeated ex Aspiration hazard Potential health er Inhalation: Harmful Skin: Harmful if ab Eyes: Causes eye Signs and sympto by any route can cc "lead line" on the g Additional inform. Section 12 Toxicity to fish: L Toxicity to fish: L Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N	posure:       Data not available         :       Data not available         ffects:       If inhaled.         if swallowed.       sorbed through skin. Causes skir         sorbed through skin. Causes skir       irritation.         oms of exposure:       Lead is a cum         ause headache, vomiting, dizzine       ums, metallic taste, definite loss of         ation:       RTECS #:       OG2100000 [I         Ecological information       C50 - Oncorhynchus mykiss (rain         a and other aquatic invertebrat       No data available         egradability:       No data available         o data available       odata available         o data available       notices: An environmental hazard comparison	i irritation. ulative poison an ss, cyanosis, dec of appetite, insom .ead nitrate] bow trout) - 1.5 n es: EC50 - Daph Bioaccum PBT and v	nd exposure to even sn rreased blood pressure inia, dizziness, high lea ng/l - 96.0 h [Lead nitra nia magna (Water flea ulative potential: No PvB assessment: No	nall amounts can rais e and possible respira ad levels in the blood ate] ) - 0.5 - 2.0 mg/l - 48 data available o data available	e the body's o tory paralysis and urine with h [Lead nitrat	content to toxic le s. Acute poisonin h shock, coma ar	evels. Nitrates entering the boo g can lead to muscle weaknes
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STOT-repeated ex Aspiration hazard Potential health ei Inhalation: Harmful Skin: Harmful if ab Eyes: Causes eye Signs and sympto by any route can cc "lead line" on the g Additional inform: Section 12 Toxicity to fish: L 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: No Section 15	posure:       Data not available         :       Data not available         if cata not available       ffects:         if inhaled.       if swallowed.         sorbed through skin. Causes skir       irritation.         oms of exposure:       Lead is a cum         ause headache, vomiting, dizzine       ums, metallic taste, definite loss of         ause headache, vomiting, dizzine       ums, metallic taste, definite loss of         ation:       RTECS #:       OG2100000 [I         Ecological information       C50 - Oncorhynchus mykiss (rain         a and other aquatic invertebrat       No data available         egradability:       No data available         egradability:       No data available         odata available       ects:         ects:       An environmental hazard composed for the         Disposal considerations       uidelines are intended for the         uidelines are intended for the       edifferent.         Disposal considerations       Not applicable       Ship         Not applicable       Pack         ot applicable       2020         Regulatory information       red to be listed if the CAS number for	i irritation. ulative poison an ss, cyanosis, dec of appetite, insom .ead nitrate] bow trout) - 1.5 n es: EC50 - Daph Bioaccum PBT and v annot be excludee disposal of cata ordance with all ping name: N ing group: N ERG Guide #	Id exposure to even sm reased blood pressure inia, dizziness, high lea ng/l - 96.0 h [Lead nitra nia magna (Water flea) ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o l local, state and fed Not Regulated lot applicable Not applicable	nall amounts can rais and possible respira ad levels in the blood ate] ) - 0.5 - 2.0 mg/l - 48 data available fessional handling or nly. Federal regula eral regulations or o	e the body's o tory paralysis and urine wit h [Lead nitrat disposal. tions may a contract with	content to toxic le s. Acute poisonin h shock, coma ar e] e] pply to empty co n a licensed che	evels. Nitrates entering the boo g can lead to muscle weaknes nd death in extreme cases.

ent 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

# 

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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.

Synonyms Cobaltous Nitrate, Aqueous Solution	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS07 / GHS08 / GHS09 Target organs: Kidneys, Lungs, Thyroid	<ul> <li>Precautionary statement:</li> <li>P201: Obtain special instructions before use.</li> <li>P202: Do not handle until all safety precautions have been read and understood.</li> <li>P261: Avoid breathing mist/vapours/spray.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P270: Do not eat, drink or smoke when using this product.</li> <li>P272: Contaminated work clothing should not be allowed out of the workplace.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.</li> <li>P302+P352: IF ON SKIN: Wash with plenty of water and soap.</li> <li>P333+P313: If skin irritation or rash occurs: Get medical attention.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337+P313: If eye irritation persists: Get medical attention.</li> <li>P362+P364: Take off contaminated clothing and wash it before reuse.</li> <li>P391: Collect spillage.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

Section 3	Composition / information on	ingredients			
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.

#### Section 7 Handling and storage Page E2 of E2

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 <sup>3</sup> (A3)	TWA: 0.1 mg/m <sup>3</sup> metal dust and fume	TWA: 0.05 mg/m <sup>3</sup> 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 chen	nical properties					
pH: Data not avai Melting / Freezing po	Data not available. ilable. proximately 0°C (32°F) (v proximately 100°C (212°F) (v	Flammability (s Explosion limit Vapor pressure vater) Vapor density vater) Relative density (	tte (Water = 1): <1 solid/gas): Data not a ts: Lower / Upper: Di e (mm Hg): 14 (water) (Air = 1): 0.7 (water) (Specific gravity): Appro Complete in water.	ata not available	Auto-ignitio Decomposi Viscosity: Molecular f		e: Data not available ure: Data not available. ble. re
Section 10	Stability and react	ivity					
Chemical stabilit Conditions to ave	ty: Stable oid: Excessive temperatu		us polymerization: W	/ill not occur.			
	terials: Oxidizers.						
Hazardous decor	mposition products: Nitr	ogen oxides.					
Section 11	Toxicological infor	mation					
Germ cell mutag Carcinogenity: I NTP: No compone IARC classified: G OSHA: No compo Ca Prop 65: This Reproductive too	kin sensitization: Data no jenicity: Data not available Data not available ent of this product present Group 2B: Possibly carcino onent of this product preser product does not contain a xicity: Data not available	e at levels greater than or e genic to humans. [Cobalt i nt at levels greater than or	nitrate] equal to 0.1% is identi	ified as a carcinogen	n or potential c	arcinogen by O	SHA.
STOT-repeated e Aspiration hazar Potential health Indation: Harmfu Skin: Contact cau Eyes: Contact cau Signs and sympt possibly carcinoge	bosure: Data not available exposure: Data not availa rd: Data not available effects: ful if inhaled. ul in ingested. uses irritation or acid burns uses irritation or acid burns toms of exposure: The s enic to humans. Exercise	ble s. s. ubstance is irritating to ski appropriate procedures to			prolonged inh	alation may cau	use asthma. This substance is
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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

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Science for the classroom"

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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 NITRIC ACID, 0.1 MOLAR SOLUTION	
Synonyms Azotic Acid, Water Solution	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS05 Target organs: Eyes, Skin, Respiratory system, Teeth GHS Classification: Skin corrosion (Category 1A) Eye damage (Category 1) GHS Label information: Hazard statement: H314: Causes severe skin burns and eye damage.	Precautionary statement:         P260: Do not breathe mist/vapours/spray.         P264: Wash hands thoroughly after handling.         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 15 minutes. Remo contact lenses, if present and easy to do. Continue rinsing.         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 Nitric acid, 70% solu	ution	7732-18-5 7697-37-2	99.370% 0.634%	231-791-2 231-714-2	
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. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE EYE BURNS. 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 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: 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 away from incompatible substances. Protect from physical damage and sunlight.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Nitric acid	TWA: 2 ppm STEL: 4 ppm	TWA: 2 ppm	TWA: 2 ppm STEL: 4 ppm		

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 respirato	r.							
Section 9	Physical and chen	nical properties						
Odor: Irritating, su Odor threshold: D pH: <1 (1% solutio Melting / Freezing p	Data not available. n) point: -22 to -41°C (-7.6 to )-122°C (248-252°F)*	-42°F)* Flammability Explosion lim Vapor pressur Vapor density Relative dens	ate (=1): Data not a (solid/gas): Data not a its: Lower / Upper: D re (mm Hg): 49-55 @ (Air = 1): Data not av ity (Specific gravity): : Soluble in water.	ivailable. lata not available 25°C* ailable	Auto-igniti Decompos Viscosity: Molecular		: Data not availab i <b>re:</b> Data not availa ble. e	
Section 10	Stability and react	ivity						
Chemical stability Conditions to avo		Hazard t when heated. Avoid co	ous polymerization: N ntact with water.	Vill not occur.				
Incompatible mate	erials: Reacts with a wid	e variety of metals (espe	cially when powdered),	bases, carbides, su	ılfides, fulminat	es, picrates, turp	pentine and combu	stible mater
Hazardous decom	position products: Nitr	ogen oxides and hydroge	en gas.					
Serious eye dama Respiratory or ski Germ cell mutage Carcinogenity: D. NTP: No compone IARC: No compone OSHA: No compone Ca Prop 65: This p	nt of this product present ent of this product presen nent of this product prese roduct does not contain a	it - Corrosive ot available	r equal to 0.1% is identi or equal to 0.1% is ident	fied as probable, po tified as a carcinoge	ssible or confir n or potential o	med human card carcinogen by OS		
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thr Skin: Serious skin Eyes: Redness, pa Signs and symptc pressure, leading to Additional inform	g sensation, cough, labor roat, abdominal pain, buri burns, pain, yellow staini ain, burns. <b>oms of exposure:</b> Effect	ble ed breathing, shortness o ning sensation in the thro ing of the skin. is may be delayed. Large ssibly death. Exercise ap 75000	e doses may cause: con	shock or collapse. version of hemoglo	bin to methemo	oglobin, producin	ng cyanosis, marke	d fall in bloc
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Section 1

Identification

# INNOVATING SCIENCE<sup>® by Aldon</sup> 221 Root

"Cutting 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) SOLUTION	
Synonyms Silver(I) Nitrate, Water Solution / Silver Nitrate, 0.1M (0.1N) Solution	
Section 2 Hazards identification	
Signal word: WARNING         Pictograms: GHS07 / GHS09         Target organs: Kidneys, Liver         Image: Signal word: Warning of the system         Image: Signal word: Signal word	<ul> <li>Precautionary statement(s):</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P302+P352: IF ON SKIN: Wash with plenty of water and soap.</li> <li>P332+P313: If skin irritation occurs: Get medical attention.</li> <li>P362+P364: Take off contaminated clothing and wash it before reuse.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337+P313: If eye irritation persists: Get medical attention.</li> <li>P391: Collect spillage.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

### 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 <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.01 mg/m <sup>3</sup>		

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 respirato								
Section 9	Physical and chemic	cal properties						
	xteristic odor. Data not available. lable. nt: Approximately 0°C (32°F) (wa roximately 100°C (212°F) (wa	Flammability ( Explosion limi Vapor pressur Vapor density Relative density						
Section 10	Stability and reactiv	ity						
Chemical stability Conditions to avo	<ul> <li>r: Stable</li> <li>rid: Excessive temperature</li> </ul>		us polymerization:	Will not occur.				
Incompatible mate	erials: Combustible materi	als, reducing agents, or	ganic substances, stro	ong basis and alkalis				
Hazardous decom	nposition products: Nitrog	gen oxides.						
Section 11	Toxicological inform	nation						
IARC: No compone OSHA: No compon Ca Prop 65: This p <b>Reproductive toxi</b>	ent of this product present at ent of this product present a ment of this product present product does not contain any	at levels greater than or at levels greater than or	equal to 0.1% is ident equal to 0.1% is iden	ified as probable, po ntified as a carcinoge	sible or confi n or potential	rmed human card carcinogen by OS	0,	
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ERG: Emergency Response Guidebook.

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Section 1

Identification

# INNOVATING SCIENCE<sup>®</sup> by Aldon 221 Rev of Ward N

"Cutting edge science for the classroom"

Aldon 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 ALUMINUM NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Aluminum Nitrate, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS07 Target organs: Liver, Kidneys, Blood	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 15 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.

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Water Aluminum nitrate, nor	nahydrate	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 chem	nical properties						
	Data not available. lable. nt: Approximately 0°C (32°F) (v roximately 100°C (212°F) (v	Flammability (solid/gas): Data not available.       Auto-ignition temperature: Data not available         ailable.       Explosion limits: Lower / Upper: Data not available       Decomposition temperature: Data not available         vapor pressure (mm Hg): 14 (water)       Vapor density (Air = 1): 0.7 (water)       Viscosity: Data not available.         00°C (32°F) (water)       Relative density (Specific gravity): Approximately 1.0 (water)       Molecular formula: Mixture						
Section 10	Stability and react	ility and reactivity						
Chemical stability Conditions to avo	/: Stable bid: Excessive temperatu		ous polymerization: ation.	Will not occur.				
Incompatible mat	erials: Reducing agents,	organic materials.						
Hazardous decom	nposition products: Nitr	ogen oxides.						
Skin corrosion/irr Serious eye dama Respiratory or sk Germ cell mutage Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compor Ca Prop 65: This p Reproductive tox: STOT-single expo STOT-repeated exp	Toxicological infor ral-rat LD50: 3,671 mg/kg ritation: Data not availabl age/irritation: Data not a in sensitization: Data not ancity: Data not available bata not available ent of this product present nent of this product present oroduct does not contain icity: Data not available spare: Data not available posure: Data not available	g [Aluminum nitrate] le vailable ot available e at levels greater than or t at levels greater than o nt at levels greater than o nny chemicals known to t	r equal to 0.1% is iden or equal to 0.1% is iden	tified as probable, pos ntified as a carcinoger	sible or confi or potential of	rmed human card carcinogen by OS		
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Section 1

Identification

# INNOVATING SCIENCE<sup>®</sup> by Aldon 221 Rev of Ward N

"Cutting 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 FERRIC NITRATE, 0.1 MOLAR SOLUTION	
Synonyms Iron (III) 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 soap and water P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor if you feel unwell. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention. P362+P364: Take off contaminated clothing and wash before reuse.
<u>Hazards not otherwise classified:</u> Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known	1

Section 3 Composition / informa	ation 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 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.	Iron salts, soluble, as Fe	TWA: 1 mg/m <sup>3</sup>	None	TWA: 1 mg/m <sup>3</sup>			

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	-			D. III		
	Data not available. able. nt: Approximately 0°C (32°F) roximately 100°C (212°F) (	(water) Flammability Explosion li Vapor press Vapor densi Relative densi	rate (Water = 1): <1 y (solid/gas): Data not av mits: Lower / Upper: Da ure (mm Hg): 14 (water) ty (Air = 1): 0.7 (water) ty (Specific gravity): Appro s): Complete in water.	ata not available	Auto-ignitio Decomposi Viscosity: Molecular f		e: Data not available ure: Data not available. ble. re
Section 10	Stability and react	ivity					
Chemical stability Conditions to avoi	: Stable id: Excessive temperatu		rdous polymerization: V on.	Vill not occur.			
ncompatible mate phosphite.	erials: Aluminum, cyanic	des, phosphorous, star	nous chloride, thiocyanate	e. Oxidizable mater	ials including su	Ilfur, organic ma	aterials and sodium hypo-
lazardous decom	position products: Nite	rogen oxides.					
Section 11	Toxicological info	rmation					
ARC: No compone OSHA: No compon Ca Prop 65: This pr Reproductive toxi STOT-single expo	nt of this product present ent of this product present ent of this product prese roduct does not contain a city: Data not available	at at levels greater than nt at levels greater tha any chemicals known to	or equal to 0.1% is identifi or equal to 0.1% is identifi n or equal to 0.1% is ident o the State of California to	fied as probable, po ified as a carcinoge	essible or confirm or potential ca	ned human card arcinogen by OS	0,
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# **GENERAL STORAGE CODE GREEN**

Page E1 of E2

Section 1

Identification

# INNOVATING SCIENCE<sup>® by Aldon</sup> 221 Roc "Cutting 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	SODIUM CARBONATE, 0.1 MOLAR (0.2N) SOLUTION	
Synonyms	Sodium Carbonate, Water Solution	
Section 2	Hazards identification	
Pictograms Target orga GHS Class Eye irritation GHS Label	d: WARNING s: No symbol required ans: None known ification: n (Category 2B) information: Hazard statement: les eye irritation.	Precautionary statement: P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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 Water 7732-18-5 98.94% 231-791-2 Sodium carbonate 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 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 limi Vapor pressur Vapor density Relative density	tte (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 r)	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re		
Section 10	Stability and reactivity								
Chemical stability:         Stable         Hazardous polymerization:         Will not occur.           Conditions to avoid:         Excessive temperatures.         Hygroscopic material, avoid moisture.									
be produced.	Incompatibilities with other materials: Acids cause decomposition liberating gaseous carbon dioxide. When mixed with lime dust and water, corrosive and caustic soda may be produced. Hazardous decomposition products: Carbon dioxide.								
	·								
Section 11	Toxicological information				# FO !!				
Skin corrosion/irrita Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No componen OSHA: No componen OSHA: No componen Ca Prop 65: This pro Reproductive toxici STOT-single expose STOT-repeated exp Aspiration hazard: Potential health effe Inhalation: May be h Ingestion: May caus Skin: May be harmfu Eyes: May cause ey Signs and sympton Additional informat	Acute toxicity:       Oral-rat LD50: 4090 mg/kg ; Inhalation-rat LC50: 2.3 mg/l/2 hours ; Dermal-rat LD50: 2210 mg/kg [Sodium carbonate]         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 carcinogen or potential carcinogen by NTP.         LARC:       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.         Ca Prop 65:       This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.         Reproductive toxicity:       Data not available         STOT-repeated exposure:       Data not available.         Aspiration hazard:								
Section 12	Ecological information								
Toxicity to daphnia Toxicity to algae: No Persistence and de Mobility in soil: No Other adverse effec	gradability: No data available data available ts: An environmental hazard ca	es: EC50 - Daphr Bioaccumu PBT and vF	nia magna (Water flea Ilative potential: No PvB assessment: No	) - 265 mg/l - 48 h [S data available o data available		ate]			
Section 13	Disposal considerations								
	delines are intended for the or different. Dispose of in acco <b>Transport information</b>								
UN/NA number: Hazard class: No Exceptions: Not	ot applicable Pack	bing name: N ing group: No ERG Guide #	0	Reportable Qua	antity: No	M	arine pollutant: No		
Section 15	Regulatory information								
	d to be listed if the CAS number for t								
Compone Sodium carbonate	Int	<b>TSCA</b> 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

Section 1

Identification

### INNOVATING SCIENCE® by Aldon 221 Roc Avon, N

"Cutting 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     SODIUM SULFATE, 0.1 MOLAR SOLUTION       Synonyms     Sodium Sulfate, Water Solution	
Synonyms Sodium Sulfate Water Solution	
Section 2 Hazards identification	
Section 2       Hazards identification         This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.       Supplemental information: Do not get in eyes, on skin, or on cloth protective gloves/protective gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves/protective/gloves	

### 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 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 Appearance: Clea Odor: No odor. Odor threshold: D	Physical and chemical pr						
Odor: No odor.	i nyoloar ana ononnoar pi	operties					
pH: Data not availa Melting / Freezing poir	ata not available. ble t: Approximately 0°C (32°F) (water) oximately 100°C (212°F) (water)	Flammability (so Explosion limits Vapor pressure ( Vapor density (A Relative density (S	e (Water = 1): <1 Jid/gas): Data not av : Lower / Upper: Da (mm Hg): 14 (water) jecific gravity): Approx Complete in water.	ta not available	Auto-igniti Decompos Viscosity: Molecular		: Data not available <b>re:</b> Data not available. ble. e
Section 10	Stability and reactivity				1		
Chemical stability Conditions to avo	: Stable d: Excessive temperatures white		s polymerization: W n.	ill not occur.			
•	vith other materials: Molten ac position products: Oxides of s		g aluminum and magr	nesium, acids.			
Section 11	Toxicological information	1					
Germ cell mutage Carcinogenity: Da NTP: No component IARC: No component OSHA: No component Ca Prop 65: This pint Reproductive toxis STOT-single exposition STOT-repeated exposition hazard Aspiration hazard Potential health ei Inhalation: May be	to f this product present at level nt of this product present at level ent of this product present at level oduct does not contain any cher city: Data not available sure: Data not available posure: Data not available i Data not available fects: harmful if inhaled. harmful if swallowed.	s greater than or equ Is greater than or eq els greater than or e	ual to 0.1% is identifie qual to 0.1% is identif	ed as probable, pos ied as a carcinoger	sible or confir or potential c	med human card arcinogen by OS	
not available. Exer		ninimize potential ha		d toxicological prop	erties have no	t been thorough	ly investigated. Specific data is
Eyes: May cause r Signs and sympto not available. Exer	nild irritation. ms of exposure: To the best of cise appropriate procedures to n	ninimize potential ha		d toxicological prop	erties have no	ot been thorough	ly investigated. Specific data is
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Eyes: May cause r Signs and sympto not available. Exer Additional informs Section 12 Toxicity to fish: G Toxicity to daphni Toxicity to algae: O Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal g	hild irritation. ms of exposure: To the best of cise appropriate procedures to n ittion: RTECS #: No data availa Ecological information ambusia affinis (Fish, fresh wate a and other aquatic invertebrai Chlorella pyrenoidosa (Algae) EC egradability: No data available o data available cts: An environmental hazard c Disposal considerations uidelines are intended for the	ninimize potential ha able r) LC50: 120 mg/l/96 tes: Daphnia magna 2199: 57,700 mg/l/8 Bioaccumula PBT and vPv annot be excluded ir disposal of catalog	zards. 6 hours [Sodium sulfat (Crustacea) EC50: 6 days [Sodium sulfate] <b>tive potential:</b> No da <b>B assessment:</b> No d n the event of unprofe g-size quantities onl	e] 30 mg/l/96 hours [S ata available lata available ssional handling or y. Federal regula	Godium sulfate disposal. ations may aj	] pply to empty c	ontainer. State and/or local
Eyes: May cause r Signs and sympto not available. Exer Additional informs Section 12 Toxicity to fish: G Toxicity to daphni Toxicity to algae: O Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal g	hild irritation. ms of exposure: To the best of cise appropriate procedures to n ittion: RTECS #: No data availa Ecological information ambusia affinis (Fish, fresh wate a and other aquatic invertebrat Chlorella pyrenoidosa (Algae) EC egradability: No data available to data available cts: An environmental hazard co Disposal considerations	ninimize potential ha able r) LC50: 120 mg/l/96 tes: Daphnia magna 2199: 57,700 mg/l/8 Bioaccumula PBT and vPv annot be excluded ir disposal of catalog	zards. 6 hours [Sodium sulfat (Crustacea) EC50: 6 days [Sodium sulfate] <b>tive potential:</b> No da <b>B assessment:</b> No d n the event of unprofe g-size quantities onl	e] 30 mg/l/96 hours [S ata available lata available ssional handling or y. Federal regula	Godium sulfate disposal. ations may aj	] pply to empty c	ontainer. State and/or local
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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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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting 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 AMMONIUM HYDROXIDE, 0.1 MOLAR (0.1 NORMAL)	
Synonyms Ammonium Hydroxide, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS09 Farget organs: Eyes, Skin, Mucous membranes	Precautionary statement: P264: Wash hands thoroughly after handling. P273: Avoid release to the environment. P302+P313: If skin irritation occurs: Get medical attention. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 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 accordance with local/regional/national regulations.

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

Section 3	Composition / information on	ingredients			
Chemical Name		CAS #	%	EINECS	
Water Ammonium hydroxidd	e (as Ammonia)		oximately 99.84% roximately 0.16%	231-791-2 215-647-6	
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: CAUSES 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 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.

**Containment and Cleanup:** Carefully neutralize with Sodium bicarbonate, absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts/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.

ERG: Emergency Response Guidebook.

Form 06/2015

Section 8	Exposure controls / personal pro	tection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Limits.	Ammonia CAS No. 7664-41-7	TWA: 17 mg/m <sup>3</sup> ; STEL: 24 mg/m <sup>3</sup>	TWA: 50 ppm, 35 mg/m <sup>3</sup>	TWA: 18 mg/m <sup>3</sup> ; STEL: 27 mg/m <sup>3</sup>

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	nical propertie	s						
Odor: Strong amı Odor threshold: pH: Data not avai Melting / Freezing po	Data not available. ilable. <b>pint:</b> Approximately 0°C (32°F) ( proximately 100°C (212°F) (	(water) Relativ	mability (s osion limit or pressure or density ( ive density (	te (Water = 1): <1 solid/gas): Data not s: Lower / Upper: I e (mm Hg): 14 (wate (Air = 1): 0.7 (water) Specific gravity): App Complete in water.	Data not available r)	Auto-ignition Decompos Viscosity: Molecular f	•	e: Data not available ure: Data not availabl ble. re	e.
Section 10	Stability and react	livity							
Chemical stability Conditions to avo	y: Stable oid: Excessive temperatu	ures which cause		us polymerization: \	Will not occur.				
	terials: Acids, strong oxid								
•	mposition products: Dec				42°F) to hydrogen ga	s and nitrogen	oxides.		
Skin corrosion/irr Serious eye dama Respiratory or sk Germ cell mutage Carcinogenity: D NTP: No compone IARC: No compon OSHA: No compon Ca Prop 65: This p Reproductive tox STOT-single expo	ent of this product present nent of this product presen onent of this product prese product does not contain a <b>kicity:</b> Data not available	ole available tot available le at levels greater tt at levels greate int at levels great any chemicals kn	r than or eo er than or e ter than or nown to the	qual to 0.1% is identif equal to 0.1% is identi equal to 0.1% is iden estate of California to	fied as probable, pos tified as a carcinoger o cause cancer or rep	sible or confirm or potential co productive toxic	ned human card arcinogen by OS sity.	SHA.	
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Revision Date: July 11, 2022

# **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "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 SODIUM CHLORIDE, 0.1 MOLAR SOLUTION	
Synonyms Sodium Chloride, Water Solution	
Section 2 Hazards identification	
This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Signal word: Not classified Pictograms: Not classified Target organs: None known	Supplementary 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 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	

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.

Page E2 of E2

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 prot	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	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.

Section 9	Physical and chemical pr	operties					
Odor: No odor. Odor threshold pH: Data not av Melting / Freezing p	I: Data not available. /ailable. point: Approximately 0°C (32°F) (water) /sproximately 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 r (Air = 1): 0.7 (water) r (Specific gravity): App 1: Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available are: Data not available. ble. re
Section 10	Stability and reactivity						
Chemical stabil Conditions to a	lity: Stable void: Excessive temperatures whic		tion.	Will not occur.			
ncompatible m	aterials: Strong acids.						
Hazardous deco	omposition products: Electrolysis	can produce chlo	orine gas.				
Section 11	Toxicological information						
•	Oral-rat LD50: 3000 mg/kg [Sodium	chloride]					
	/irritation: Data not available						
•	mage/irritation: Data not available skin sensitization: Data not availa	ble					
	genicity: Data not available						
	Data not available						
NTP: No compor	nent of this product present at levels						
	onent of this product present at level						
	ponent of this product present at leve s product does not contain any chen	0		0		0 ,	SITA.
	oxicity: Data not available					ony.	
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SIUI-single ex	posure: Data not available						
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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

Section 1

# SAFETY DATA SHEET

# **GENERAL STORAGE CODE GREEN**

Page E1 of E2

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

"Cutting edge science for the classroom" by Aldon "Cutting edge science for the classroom"

Identification

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

EDTA DISODIUM, 0.1M AQUEOUS SOLUTION Product Synonyms Ethylenediaminetetraacetic Acid, 0.1M Aqueous Solution Section 2 Hazards identification Signal word: WARNING Precautionary statement: Pictograms: No symbol required P264: Wash hands thoroughly after handling. Target organs: None P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **GHS Classification:** P337+P313: If eye irritation persists: Get medical attention. Eye irritation (Category 2B) GHS Label information: Hazard statement: 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
 7732-18-5
 96.28%
 231-791-2

 Ethylenediaminetetraacetic acid
 6381-92-6
 3.72%
 200-449-4

### 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: 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 prot	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	EDTA	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	incui properties					
Odor: No odor. Odor threshold: pH: Data not avai Melting / Freezing po	pint: Approximately 0°C (32°F) proximately 100°C (212°F) (	(water) Relative den	n rate (Water = 1): <1 ity (solid/gas): Data not limits: Lower / Upper: sure (mm Hg): 14 (water sity (Air = 1): 0.7 (water sity (Specific gravity): App es): Complete in water.	Data not available er) )	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re
Section 10	Stability and react	tivity					
Chemical stability Conditions to avo	-	Haza	rdous polymerization:	Will not occur.			
	terials: Strong oxidizers,			ontact with aluminum.	zinc. nickel. c	opper and coppe	er allovs.
	mposition products: Ca		5		, ,		,
Section 11	Toxicological info	rmation					
Germ cell mutage Carcinogenity: D NTP: No compone IARC: No compon OSHA: No compon Ca Prop 65: This p Reproductive tox	kin sensitization: Data n enicity: Data not availab Data not available ent of this product present nent of this product preser nent of this product prese product does not contain n kicity: Data not available	le t at levels greater than nt at levels greater thar ant at levels greater tha any chemicals known t	or equal to 0.1% is iden n or equal to 0.1% is iden	tified as probable, pos ntified as a carcinoger	sible or confir or potential o	med human card carcinogen by OS	• •
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STOT-repeated ex Aspiration hazard Potential health e Inhalation: Inhalat Ingestion: Ingestic Skin: Contact with Eyes: Contact with Signs and sympt Additional inform Section 12	xposure: Data not availa d: Data not available effects: tion may cause respirator on may cause abdominal h skin may cause irritation th eyes may cause rednes toms of exposure: Exer- nation: RTECS #: AH40 Ecological inform	able y irritation. pain and diarrhea. n on prolonged contact. ss and pain. cise appropriate proced 225000 [CAS # 60-00-4 <b>ation</b>	dures to minimize potenti anhydrous]				
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# GENERAL STORAGE CODE GREEN

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Section 1

Identification

### INNOVATING SCIENCE® by Aldon 221 Roc Avon, N

"Cutting 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 SODIUM IODIDI	E, 0.1 MOLAR SOLUTION
Synonyms Sodium Iodide, A	Aqueous Solution
Section 2 Hazard	Is identification
Signal word: WARNING Pictograms: Not classified Target organs: None known GHS Classification: Skin irritation (Category 3) Eye irritation (Category 2B) GHS Label information: Haza H316: Causes mild skin irritatio 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 prot	ection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Particles not otherwise classified	Not established	TWA: 15 mg/m <sup>3</sup> 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 chem	ical properties					
Odor: No odor. Odor threshold pH: Data not av Melting / Freezing p	point: Approximately 0°C (32°F) (v pproximately 100°C (212°F) (w	Water) Relative density ( Explosion limi Vapor pressur Vapor density Relative density	tte (Water = 1): <1 solid/gas): Data not tts: Lower / Upper: 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 Ire: Data not available. ble. re
Section 10	Stability and reactive	vity					
Chemical stabili Conditions to a	ity: Stable void: Excessive temperatur		us polymerization: ion. Protect from ligh				
Incompatible m	aterials: Acids, strong oxidi	izers, metallic salts, chlora	al hydrate, perchloric	acid, bromine trifluorio	de.		
Hazardous deco	omposition products: lodir	ne, sodium oxide. In pres	ence of acids can libe	erate hydrogen iodide	. In presence	of oxidizers can	liberate iodine.
Section 11	Toxicological inform Data not available	mation					
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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.

# **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting 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	SODIUM THIOCYANATE, 0.1 MOLAR SOLUTION	
Synonyms	Sodium Thiocyanate, Water Solution	
Section 2	Hazards identification	
Signal word Pictograms: Target organ GHS Classif Acute toxicity Eye irritation GHS Label i H303: May b H320: Cause Supplement EUH032: Co	: WARNING No symbol required <b>is:</b> Liver, Kidneys, Thyroid	Precautionary statement: P264: Wash hands thoroughly after handling. P312: Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention.
	ards not otherwise classified (PHNOC) - Not Known Composition / information on ingredients	
Section 3		

Section 3	Composition / Information on	Ingrealents			
Chemical Name		CAS #	%	EINECS	
Water Sodium thiocyanate		7732-18-5 540-72-7	99.19% 0.81%	231-791-2 208-754-4	
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: 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. Store away from acids, bases, and oxidizers.

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 <sup>3</sup> 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/MSHA-

Appoarance: Cl	ection 9 Physical and chemical properties							
Odor: No odor. Odor threshold: pH: Data not ava Melting / Freezing po	pint: Approximately 0°C (32°F) (water) proximately 100°C (212°F) (water)	Flammability Explosion lim Vapor pressu Vapor density Relative density	Flammability (solid/gas): Data not available.       Identify         Explosion limits: Lower / Upper: Data not available       Identify         Vapor pressure (mm Hg): 14 (water)       Identify         Vapor density (Air = 1): 0.7 (water)       Identify			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 stabilit Conditions to av	<ul> <li>stable</li> <li>oid: Excessive temperatures which</li> </ul>		<b>ous polymerization:</b> \ tion.	Will not occur.				
ncompatible ma	terials: Chlorates, nitrates, nitric a	acid, organic perc	oxides, oxidizing agents	s, peroxides, potassi	um chloride ar	id sodium chlorid	de.	
Hazardous deco	mposition products: Nitrogen an	id sulfur oxides, c	arbonyl sulfide, hydrog	en sulfide and carbo	n disulfide.			
Section 44	TovicelesiesLinformation							
ection 11	Toxicological information Dral-rat LD50: 764 mg/kg [Sodium							
Carcinogenity: I NTP: No compon IARC: No compor OSHA: No compor Ca Prop 65: This Reproductive to: STOT-single exp STOT-repeated e Aspiration hazar Potential health Inhalation: May b	e harmful if inhaled. e harmful if swallowed. irritation.	ls greater than or els greater than o	equal to 0.1% is identi r equal to 0.1% is iden	fied as probable, pos tified as a carcinoge	sible or confir or potential o	med human care arcinogen by OS		
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not available. Ex	toms of exposure: To the best of ercise appropriate procedures to m	ninimize potential	hazards.	nd toxicological prop	erties have no	ot been thorough	ly investigated. Specific data	
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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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Section 1

Identification

# INNOVATING SCIENCE<sup>®</sup> by Aldon 221 Roc

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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.

### Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients				
Chemical Name		CAS #	%	EINECS	
Water Sodium chromate		7732-18-5 7775-11-3	97.66% 2.34%	231-791-2 231-889-5	
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: 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

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 Limits.	As water soluble Cr(VI) inorganic compounds	TWA: 0.05 mg/m <sup>3(A1)*</sup>	TWA: 0.005 mg/m <sup>3</sup> *	TWA: 0.001 mg/m <sup>3</sup> *		

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 respirato	n.							
Section 9	Physical and chemical p	operties						
	Data not available. able. nt: Approximately 0°C (32°F) (water) roximately 100°C (212°F) (water)	Flammability (s Explosion limit Vapor pressure Vapor density ( Relative density (	te (Water = 1): <1 solid/gas): Data not a ts: Lower / Upper: D e (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appro Complete in water.	ata not available )	Auto-ignit Decompos Viscosity: Molecular		: Data not available I <b>re:</b> Data not available. ble. e	
Section 10	Stability and reactivity	tability and reactivity						
Chemical stability	: Stable id: Excessive temperatures whi		ous polymerization:	Will not occur.				
	with other materials: Combusti	-						
•	position products: Chromium		0 0	e, or sodium oxides ı	may also be p	roduced.		
Section 11	Toxicological information	1						
Germ cell mutagel Carcinogenity: Da NTP: Known to be a IARC classified: Gr OSHA: Specifically CA Prop 65: A WA reproductive harm. Reproductive toxi	n sensitization: Sensitizer nicity: Data not available ata not available a human carcinogen. oup 1: Carcinogenic to humans. regulated carcinogen (Sodium c RNING! : This product can expo city: Data not available		, Chromium [hexavale	nt compounds], whic	h is known to	the State of Calif	ornia to cause cancer and	
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STOT-repeated ex Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: May be harm Eyes: May be harm Eyes: May cause e Signs and sympto potential hazards. Additional informa Section 12 Toxicity to fish: Li Toxicity to fish: Li Toxicity to daphni Toxicity to daphni Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gregulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15	sure: Data not available posure: Data not available : Data not available : Data not available : Data not available : Data not available ifects: harmful if inhaled. May cause a harmful if swallowed. ful in contact with skin. Causes ave irritation. ms of exposure: May cause gu ation: RTECS #: GB2955000 [ Ecological information C50 - Pimephales promelas (fatt a and other aquatic invertebra EC50 - Scenedesmus quadricau legradability: No data available to data available ects: An environmental hazard of Disposal considerations uidelines are intended for the be different. Dispose of in act Transport information Not applicable Ship Not applicable Pac to applicable 2020 Regulatory information	skin irritation. May enetic defects. Ma Sodium chromate] ead minnow) - 17 tes: EC50 - Daphi da (Algae) - 580 µ Bioaccumu PBT and vi annot be excluded disposal of cata tordance with all ping name: No ERG Guide #	y cause an allergic ski ay cause cancer. May C6 mg/L - 96.0 h [Sodii nia magna (Water flea g/L/growth rate [Sodiu ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o local, state and fed lot Regulated ot applicable Not applicable	n reaction. damage fertility or th um chromate] ) - 0.021 mg/L - 48 h m chromate] data available fessional handling or nly. Federal regul eral regulations or	e unborn child [Sodium chro r disposal. Ve ations may a contract with	mate] ry toxic to aquatic pply to empty c a a licensed che	c life. container. State and/or loca mical disposal agency.	
STOT-repeated ex Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: May be harm Eyes: May be harm Eyes: May cause e Signs and sympto potential hazards. Additional informa Section 12 Toxicity to fish: Li Toxicity to fish: Li Toxicity to daphni Toxicity to daphni Toxicity to daphni Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gregulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15 A chemical is consider	sure: Data not available posure: Data not available : Data not available if constant available ffects: harmful if inhaled. May cause a harmful if swallowed. ful in contact with skin. Causes ave irritation. oms of exposure: May cause ge ation: RTECS #: GB2955000 [ Ecological information C50 - Pimephales promelas (fatt a and other aquatic invertebra EC50 - Scenedesmus quadricau legradability: No data available to data available acts: An environmental hazard of Disposal considerations uidelines are intended for the be different. Dispose of in act Transport information Not applicable Ship Not applicable Pac to applicable 2020 Regulatory information red to be listed if the CAS number for	skin irritation. May enetic defects. Ma Sodium chromate] ead minnow) - 17 tes: EC50 - Daphi da (Algae) - 580 µ Bioaccumu PBT and vi annot be excluded disposal of cata ordance with all ping name: N cing group: Ni D ERG Guide # the anhydrous form	y cause an allergic ski ay cause cancer. May 6 mg/L - 96.0 h [Sodii nia magna (Water flea g/L/growth rate [Sodiu ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o local, state and fed lot Regulated ot applicable Not applicable is on the Inventory list.	n reaction. damage fertility or th um chromate] ) - 0.021 mg/L - 48 h m chromate] data available fessional handling or nly. Federal regula eral regulations or <b>Reportable Qua</b>	e unborn child [Sodium chro r disposal. Ve ations may a contract with untity: Yes	mate] ry toxic to aquatic pply to empty c a licensed che Ma	c life. container. State and/or loca amical disposal agency. arine pollutant: No	
STOT-repeated ex Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: May be harm Signs and sympto potential hazards. Additional information Section 12 Toxicity to fish: Li Toxicity to fish: Li Toxicity to fish: Li Toxicity to daphni Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effet Section 13 These disposal gregulations may be Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15	sure: Data not available posure: Data not available : Data not available if constant available ffects: harmful if inhaled. May cause a harmful if swallowed. ful in contact with skin. Causes ave irritation. oms of exposure: May cause ge ation: RTECS #: GB2955000 [ Ecological information C50 - Pimephales promelas (fatt a and other aquatic invertebra EC50 - Scenedesmus quadricau legradability: No data available to data available acts: An environmental hazard of Disposal considerations uidelines are intended for the be different. Dispose of in act Transport information Not applicable Ship Not applicable Pac to applicable 2020 Regulatory information red to be listed if the CAS number for	skin irritation. May enetic defects. Ma Sodium chromate] ead minnow) - 17 tes: EC50 - Daphi da (Algae) - 580 µ Bioaccumu PBT and vi annot be excluded disposal of cata tordance with all ping name: No ERG Guide #	y cause an allergic ski ay cause cancer. May C6 mg/L - 96.0 h [Sodii nia magna (Water flea g/L/growth rate [Sodiu ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o local, state and fed lot Regulated ot applicable Not applicable	n reaction. damage fertility or th um chromate] ) - 0.021 mg/L - 48 h m chromate] data available fessional handling or nly. Federal regul eral regulations or	e unborn child [Sodium chro r disposal. Ve ations may a contract with	mate] ry toxic to aquatic pply to empty c a a licensed che	c life. container. State and/or loca mical disposal agency.	

ent 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

Identification

### "Cutting edge science for the classroom" by Aldon "655) 221 Roc Avon, W

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 DICHROMATE, 0.1 MOLAR SOLUTION	
Synonyms Sodium Dichromate, Water Solution	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS06 / GHS08 / GHS09 Target organs: Kidneys, Heart, Respiratory system	<ul> <li>Precautionary statement:</li> <li>P201: Obtain special instructions before use.</li> <li>P202: Do not handle until all safety precautions have been read and understood.</li> <li>P260: Do not breathe mist/vapours/spray.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P270: Do not eat, drink or smoke when using this product.</li> <li>P271: Use only outdoors or in a well-ventilated area.</li> <li>P272: Contaminated work clothing should not be allowed out of the workplace.</li> <li>P273: Avoid release to the environment.</li> <li>P280: Wear respiratory protection.</li> <li>P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.</li> <li>P302+P352: IF ON SKIN: Wash with plenty of water and soap.</li> <li>P312: Call a POISON CENTER or doctor if you feel unwell.</li> <li>P333+P313: If skin irritation or rash occurs: Get medical attention.</li> <li>P362+P364: Take off contaminated clothing and wash it before reuse.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337+P313: If eye irritation persists: Get medical attention.</li> <li>P391: Collect spillage.</li> <li>P403:+P233: Store in a well-ventilated place. Keep container tightly closed.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

### 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 dichromate, dihyo	drate	7732-18-5 7789-12-0	97.09% 2.91%	231-791-2 234-190-3	
Section 4 Fi	rst aid measures				

**INGESTION:** TOXIC 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. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. 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 CAUSE AN ALLERGIC SKIN REACTION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

### Section 5 Fire fighting measures

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 Linnes.	As water soluble Cr(VI) inorganic compounds	TWA: 0.05 mg/m <sup>3(A1)</sup> *	TWA: 0.005 mg/m <sup>3*</sup>	TWA: 0.001 mg/m <sup>3</sup> *		

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-

Respiratory protection approved respirator.	on: None should be needed in r	ormal laborator	y handling at room ter	nperatures. If misty o	conditions prev	ail, work in fume	hood or wear a NIOSH/MSHA-
Section 9	Physical and chemical prop	perties					
	a not available. e. Approximately 0°C (32°F) (water) nately 100°C (212°F) (water)	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)			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: S Conditions to avoid:	table Excessive temperatures which		us polymerization:	Will not occur.			
Incompatibilities with	other materials: Strong alkal	es, acids, comb	oustibe materials, and	oxidizing materials.			
Hazardous decompo	sition products: Chromic oxid	es, chromium o	kides, sodium hydroxid	de or sodium oxide.			
Section 11	Toxicological information						
Skin corrosion/irritat Serious eye damage/ Respiratory or skin s Germ cell mutagenic Carcinogenity: Data NTP: Listed. IARC classified: Group OSHA: Listed as Chro CA Prop 65: A WARN reproductive harm. Reproductive harm. Reproductive toxicity STOT-single exposur STOT-repeated exposur STOT-repeated exposur Aspiration hazard: D Potential health effect Inhalation: Fatal if inh. Ingestion: Toxic if swa Skin: Harmful in conta Eyes: Causes serious Signs and symptoms prolonged or repeated	<ul> <li>1: Carcinogenic to humans. mium(VI) compound.</li> <li>ING! : This product can expose</li> <li>2: Data not available</li> <li>3: Data not available</li> <li>3: Data not available</li> <li>4: not available</li> <li>4: anot available</li> <li>5: anot available</li> <li>6: May cause allergy or asth</li> <li>10wed.</li> <li>10wed.</li></ul>	[Sodium dichro irritant. [Sodiu you a chemical ma symptoms c on. May cause stic defects. Ma procedures to	mate] m dichromate] , Chromium [hexavale or breathing difficulties an allergic skin reaction y cause cancer. May minimize potential haz	nt compounds], which if inhaled. May caus on. damage fertility. May	n is known to th e respiratory ir	ne State of Califor	rnia to cause cancer and
Section 12	Ecological information						
Toxicity to daphnia a Toxicity to algae: No Persistence and deg Mobility in soil: No d	radability: No data available	Bioaccumu PBT and v	able Ilative potential: No PvB assessment: No	data available o data available	disposal. Ver	y toxic to aquatic	life.
Section 13	Disposal considerations						
regulations may be	elines are intended for the di different. Dispose of in accor	sposal of cata dance with all	log-size quantities of local, state and fed	nly. Federal regula eral regulations or o	ations may ap contract with	ply to empty co a licensed chen	ntainer. State and/or local nical disposal agency.
Section 14	Transport information		at Danulate d				
UN/NA number: N Hazard class: Not Exceptions: Not a	applicable Packin	ng name: N ng group: N RG Guide #	-	Reportable Qua	ntity: No	Mar	ine pollutant: No
Section 15	Regulatory information						
	to be listed if the CAS number for th	-		RCRA code	ופח	NDSI	CA Bron 65
Componer		TSCA	CERLCA (RQ)		DSL	NDSL	CA Prop 65
Sodium dichromate so	lution	Listed	Not listed	Not listed	Listed	Not listed	WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
Section 16	Other information						
The information contained	herein is furnished without warrant	of any kind Em	playara abauld upa thia i	oformation only as a cur	plement to othe	r information acthor	ad 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
# CORROSIVE STORAGE CODE WHITE

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting edge science for the classroom"

**Y Aldon** 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 HYDROXIDE, 0.1 MOLAR (0.1N) SOLUTION Product Synonyms Sodium Hydroxide, Water Solution (0.1M) Section 2 Hazards identification Signal word: WARNING Precautionary statement: Pictograms: None required P264: Wash hands thoroughly after handling. Target organs: Respiratory tract, gastrointestinal tract, eyes, skin. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **GHS Classification:** P332+P313: If skin irritation occurs: Get medical attention. Skin irritation (Category 3) P337+P313: If eye irritation persists: Get medical attention. 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 hydroxide		7732-18-5 1310-73-2	99.6% 0.4%	231-791-2 215-185-5		
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 <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	STEL: C 2 mg/m <sup>3</sup>	

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-

Section 9	Physical and chemical pro	operties					
Appearance: Clear, o Odor: No odor. Odor threshold: Not pH: Data not availabl Melting / Freezing po Boiling point: ~ 100° Flash point: Not flam	applicable. e. <b>sint:</b> ~ 0°C (~ 32°F) [water] °C (212°F) [water]	Evaporation rate (Water = 1): < 1 Flammability (solid/gas): Not applica Explosion limits: Lower / Upper: Not Vapor pressure (mm Hg): 14 [water] Vapor density (Air = 1): 0.7 [water] Relative density (Specific gravity): 1 Solubility(ies): Complete in water.	ot applicable	Auto-ignition t	temperature n temperatu ta not availat mula: Mixtur	re	
Section 10	Stability and reactivity						
Incompatible materia	Can react with carbon dioxide als: Metals, acids, organic con	npounds, organic nitro compounds.					
Hazardous decompo	osition products: Sodium oxid	le. Reacts with metals to form flammabl	e and explosive hyc	Irogen gas.			
Section 11	Toxicological information						
IARC: No component OSHA: No componen Ca Prop 65: This proc Reproductive toxicit STOT-single exposu STOT-repeated expo	of this product present at levels of this product present at level t of this product present at leve	greater than or equal to 0.1% is identifies s greater than or equal to 0.1% is identifi ls greater than or equal to 0.1% is identifi nicals known to the State of California to	ed as probable, pos fied as a carcinoger	ssible or confirmed	d human caro cinogen by O		
Ingestion: No data av Skin: Causes irritation Eyes: Causes slight i <b>Signs and symptom</b> Specific data is not av	cts: vailable for this dilution. vailable for this dilution. n upon prolonged or repeated of rritation. s of exposure: To the best of	our knowledge the chemical, physical ar procedures to minimize potential hazards		perties have not be	een thorough	nly investigated at th	is dilution.
Potential health effe Inhalation: No data a Ingestion: No data a Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av	cts: vailable for this dilution. vailable for this dilution. n upon prolonged or repeated of rritation. s of exposure: To the best of vailable. Exercise appropriate p	our knowledge the chemical, physical ar procedures to minimize potential hazards		perties have not be	een thorough	nly investigated at th	is dilution.
Potential health effe Inhalation: No data a Ingestion: No data av Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informati Section 12 Toxicity to fish: LC5 Toxicity to daphnia a Toxicity to algae: No Persistence and deg Mobility in soil: No o	cts: vailable for this dilution. vailable for this dilution. n upon prolonged or repeated or ritation. s of exposure: To the best of vailable. Exercise appropriate p on: RTECS #: WB4900000 [S Ecological information 0 - Gambusia affinis (Mosquito and other aquatic invertebrate data available radability: No data available data available s: An environmental hazard ca	our knowledge the chemical, physical ar procedures to minimize potential hazards	e] 38 mg/l - 48 h [Sodi ata available data available	um hydroxide]	een thorough	nly investigated at th	is dilution.
Potential health effe Inhalation: No data a Ingestion: No data av Skin: Causes siritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informatii Section 12 Toxicity to fish: LC5 Toxicity to daphna a Toxicity to algae: No Persistence and deg Mobility in soil: No o Other adverse effect Section 13 These disposal guid	cts: vailable for this dilution. vailable for this dilution. n upon prolonged or repeated of ritation. s of exposure: To the best of vailable. Exercise appropriate p on: RTECS #: WB4900000 [S Ecological information 0 - Gambusia affinis (Mosquito and other aquatic invertebrate data available radability: No data available data available s: An environmental hazard ca Disposal considerations delines are intended for the o	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40. Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe disposal of catalog-size quantities or	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula	um hydroxide] <sup>.</sup> disposal. ations may apply	y to empty c	container. State a	nd/or local
Potential health effe Inhalation: No data a Ingestion: No data av Skin: Causes siritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informatii Section 12 Toxicity to fish: LC5 Toxicity to daphna a Toxicity to algae: No Persistence and deg Mobility in soil: No o Other adverse effect Section 13 These disposal guid	cts: vailable for this dilution. vailable for this dilution. n upon prolonged or repeated of ritation. s of exposure: To the best of vailable. Exercise appropriate p on: RTECS #: WB4900000 [S Ecological information 0 - Gambusia affinis (Mosquito and other aquatic invertebrate data available radability: No data available data available s: An environmental hazard ca Disposal considerations delines are intended for the o	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40.3 Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula	um hydroxide] <sup>.</sup> disposal. ations may apply	y to empty c	container. State a	nd/or local
Potential health effe Inhalation: No data a Ingestion: No data av Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informatii Section 12 Toxicity to fish: LC5 Toxicity to daphna a Toxicity to algae: No Persistence and deg Mobility in soil: No of Other adverse effect Section 13 These disposal guid regulations may be	cts:         vailable for this dilution.         vailable for this dilution.         n upon prolonged or repeated or         ritation.         s of exposure:         To the best of         vailable.         Exercise appropriate pon:         RTECS #:         WB4900000 [S         Ecological information         0 - Gambusia affinis (Mosquito         and other aquatic invertebrate         data available         radability:       No data available         s:       An environmental hazard ca         Disposal considerations         delines are intended for the of         different.       Dispose of in accordifierent.         Transport information         Not applicable       Ship         t applicable       Pack	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40.3 Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe disposal of catalog-size quantities on ordance with all local, state and fede ping name: Not Regulated	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula	um hydroxide] <sup>-</sup> disposal. ations may apply contract with a l	y to empty c licensed che	container. State a	nd/or local jency.
Potential health effe Inhalation: No data a Ingestion: No data av Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informati Section 12 Toxicity to fish: LC5 Toxicity to fish: LC5 Toxicity to algae: No Persistence and deg Mobility in soil: No c Other adverse effect Section 13 These disposal guid regulations may be Section 14 UN/NA number: I Hazard class: Not	cts:         vailable for this dilution.         vailable for this dilution.         n upon prolonged or repeated or         ritation.         s of exposure:         To the best of         vailable.         Exercise appropriate pon:         RTECS #:         WB4900000 [S         Ecological information         0 - Gambusia affinis (Mosquito         and other aquatic invertebrate         data available         radability:       No data available         s:       An environmental hazard ca         Disposal considerations         delines are intended for the of         different.       Dispose of in accordifierent.         Transport information         Not applicable       Ship         t applicable       Pack	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40.3 Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe disposal of catalog-size quantities or ordance with all local, state and fede ping name: Not Regulated ing group: Not applicable	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula ral regulations or	um hydroxide] <sup>-</sup> disposal. ations may apply contract with a l	y to empty c licensed che	container. State a emical disposal ag	nd/or local jency.
Potential health effe Inhalation: No data a Ingestion: No data a Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informatii Section 12 Toxicity to fish: LC5 Toxicity to daphna a Toxicity to algae: No Persistence and deg Mobility in soil: No c 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 A chemical is considered	cts:         vailable for this dilution.         vailable for this dilution.         n upon prolonged or repeated or ritation.         s of exposure:         s of exposure:         To the best of vailable.         exercise appropriate pon:         on:       RTECS #:         WB4900000 [S         Ecological information         0 - Gambusia affinis (Mosquito and other aquatic invertebrate data available         radability:       No data available         s:       An environmental hazard ca         Disposal considerations         delines are intended for the of different.         Dispose of in accordifferent.         Transport information         Not applicable       Ship         t applicable       Pack         applicable       2020         Regulatory information       to be listed if the CAS number for the of street of the code of the of street of the code of the ode o	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40. Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe disposal of catalog-size quantities or ordance with all local, state and fede ping name: Not Regulated ing group: Not applicable ERG Guide # Not applicable the anhydrous form is on the Inventory list.	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula ral regulations or <b>Reportable Qua</b>	um hydroxide] <sup>-</sup> disposal. ations may apply contract with a l <b>ntity:</b> No	y to empty c licensed che	container. State al emical disposal ag arine pollutant:	nd/or local jency. No
Potential health effe Inhalation: No data a Ingestion: No data a Skin: Causes irritatio Eyes: Causes slight i Signs and symptom Specific data is not av Additional informatii Section 12 Toxicity to fish: LC5 Toxicity to daphnia a Toxicity to algae: No Persistence and deg Mobility in soil: No c 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	cts:         vailable for this dilution.         vailable for this dilution.         n upon prolonged or repeated or         ritation.         s of exposure: To the best of         vailable. Exercise appropriate pon: RTECS #: WB4900000 [S         Ecological information         0 - Gambusia affinis (Mosquito         and other aquatic invertebrate         data available         rradability: No data available         ata available         s: An environmental hazard ca         Disposal considerations         delines are intended for the or         different. Dispose of in accord         Transport information         Not applicable       Shipp         t applicable       2020         Regulatory information         to be listed if the CAS number for the formation	our knowledge the chemical, physical ar procedures to minimize potential hazards Sodium hydroxide] fish) - 125 mg/l - 96 h [Sodium hydroxid es: Immobilization EC50 - Daphnia - 40.3 Bioaccumulative potential: No d PBT and vPvB assessment: No annot be excluded in the event of unprofe disposal of catalog-size quantities or ordance with all local, state and fede ping name: Not Regulated ing group: Not applicable ERG Guide # Not applicable	e] 38 mg/l - 48 h [Sodi ata available data available essional handling or ly. Federal regula ral regulations or	um hydroxide] <sup>-</sup> disposal. ations may apply contract with a l	y to empty c licensed che	container. State a emical disposal ag	nd/or local gency. No p 65 ot contain m to the State se cancer or

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" by Aldon "Signature and the classroom" by Aldon 21 Rochester Street Avion, NY 14414-9409 (555) 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	DEIONIZED WATER	
Synonyms	Hydrogen Oxide / Distilled Water	
Section 2	Hazards identification	
Harmonize Signal wor Pictograms Target orga GHS Class Not a hazar GHS Label Hazard sta	ance has not been classified at this time according to the Globally d System (GHS) of Classification and Labeling of Chemicals. d: Not a hazardous substance s: Not a hazardous substance ans: None known ification: dous substance information: tement: Not a hazardous substance ary statement(s): Not a hazardous substance	Supplemental information: Avoid contact with DANGEROUS WHEN WET and WATER-REACTIVE materials. For laboratory use only. Do not ingest.

#### Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Discusional In - 41--1---

Physical nazards not otherwise classified	I (PHNOC) - Not Known

Section 3	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Deionized water		7732-18-5	100%	231-791-2		
Section 4	Eirot aid maaauroo					

#### Section 4 First aid measures

Uncontaminated water should not pose any ill health effects. If ill effects develop, get immediate medical attention.

#### Section 5

Suitable Extinguishing Media: Not a fire hazard. Water is used for extinguishing fires.

Fire fighting measures

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: Avoid contact with DANGEROUS WHEN WET and WATER-REACTIVE materials. See Section 10.

Section 6 Accidental release measures

Personal Precautions: Uncontaminated material poses no hazards.

Environmental Precautions: Uncontaminated material may be flushed to sewer.

Containment and Cleanup: Uncontaminated material may be flushed to sewer.

Precautions for Safe Handling: Read label on container before using. Not for drug, food or household use. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Wash thoroughly after handling.

Conditions for Safe Storage: Store in a cool area away from water-reactive or dangerous when wet substances.

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

# Engineering controls: None required.

Respiratory protection: None required.

	Physical and cher	mical prope	erties					
Appearance: Clea Odor: No odor. Odor threshold: D pH: Data not availa Melting / Freezing Boiling point: 100 Flash point: Not fl	Data not available able <b>point:</b> 0°C (32°F) °C (212°F)	FI E: Va Va R	lammability (s xplosion limit apor pressure apor density (	y (Specific gravity)		Auto-ignitio Decomposi Viscosity: Molecular f	on temperature	ctanol / water): Data not availat : Not flammable ire: Data not available. ole.
Section 10	Stability and react	tivity						
Chemical stability Conditions to avo	: Stable id: Absorption of fumes	and carbon		us polymerization:	Will not occur.			
	erials: Water-reactive m		0	calcium, barium, alka	ali metal alloys, liquid	amalgams, am	ides, carbides,	hydrides, aluminum powders,
Hazardous decom	position products: Ele	ctrolysis will	produce explo	osive and flammable	hydrogen and oxyge	n.		
Section 11	Toxicological info	rmation						
IARC: No compone OSHA: No compone Ca Prop 65: This p Reproductive toxi STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: No ill eff Skin: No ill effects Eyes: No ill effects	nt of this product present ent of this product present nent of this product present roduct does not contain a <b>icity:</b> Data not available <b>sure:</b> Data not available <b>sposure:</b> Data not available <b>ffects:</b> ffects expected. fects expected. expected.	nt at levels gr ent at levels g any chemica e e able	reater than or o greater than or als known to th	equal to 0.1% is ider equal to 0.1% is ide	tified as probable, po ntified as a carcinoge	ossible or confir en or potential c	med human car arcinogen by O	
• • •	ation: RTECS #: Data							
Section 12	Ecological information	ation						
Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal g	legradability: No data a lo data available acts: An environmental I Disposal conside uidelines are intended	available hazard canno <b>rations</b> I for the disp of in accord	Bioaccumu PBT and vF ot be excluded	Ilative potential: No PvB assessment: No I in the event of unpr log-size quantities	lo data available ofessional handling o only. Federal regu	lations may ap		container. State and/or loca emical disposal agency.
	Not applicable		na namo: N	lot Regulated				
Hazard class:	Not applicable	Packing	g group: N	ot applicable Not applicable	Reportable Qu	antity: No	М	arine pollutant: No
	Regulatory inform			11				
Exceptions: N			anhydrous form	is on the Inventory list.				
Exceptions: N Section 15	red to be listed if the CAS n		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Exceptions: N Section 15			1004		Renaroodo			•
Exceptions: N Section 15 A chemical is consider	nent		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.
Exceptions: N Section 15 A chemical is consider Compo						Listed	Not listed	any chemicals known to the Stat of California to cause cancer or

# CORROSIVE STORAGE CODE WHITE

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting 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.

### HYDROCHLORIC ACID, 1 MOLAR (1 NORMAL) SOLUTION Product Synonyms Muriatic Acid, Water Solution / Hydrogen Chloride, Water Solution Section 2 Hazards identification Signal word: WARNING Precautionary statement(s): Pictograms: GHS05 P234: Keep only in original container. Target organs: Respiratory system, skin, eyes, lungs. P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 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. P390: Absorb spillage to prevent material damage. **GHS Classification:** P406: Store in corrosive resistant container with a resistant inner liner. Corrosive to metals (Category 1) Skin irritant (Category 3) Eye irritant (Category 2B) GHS Label information: Hazard statement(s): H290: May be corrosive to metals. 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 Hydrochloric acid		7732-18-5 7647-01-0	96.86% 3.14%	231-791-2 231-595-7	
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 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: 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. Contact with metals produce hydrogen, which is flammable and may produce explosive mixtures with air.

#### 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	tection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Linits.	Hydrogen chloride	STEL: C 2 ppm / C 2.98 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>

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, Odor: No odor. Odor threshold: No pH: No data availabl Melting / Freezing p Boiling point: ~ 100 Flash point: Not flar Evaporation rate ( =	data available e oint: ~0°C (~ 32°F) [water] °C (212°F) [water] nmable.	Explosion lin Vapor pressu Vapor densit Relative dens Solubility(ies Partition coeff	(solid/gas): No data a nits: Upper/Lower: No rre (mm Hg): 14 [water y (Air = 1): 0.7 [water] sity (Specific gravity): ): Complete. icient: (n-octanol / water): temperature: No data	o data available ] 1.0 [water] No data available	Viscosity: Molecular	sition temperatur No data availabl formula: Mixture weight: Mixture.	е.
Section 10	Stability and reactivity						
	Stable : Containers may burst when he <b>als:</b> Metals, bases, active meta	ated. Avoid co			bonates, cvani	des, sulfides, sulf	fites
formaldehyde.			, 33,,,	, ,		, ,	,
	osition products: Hydrogen ch	loride gas.					
Section 11	Toxicological information						
Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: Group 3: Not OSHA: No compone Ca Prop 65: This pro- Reproductive toxici STOT-single exposu STOT-repeated expo Aspiration hazard: Potential health effe Exercise appropriate Inhalation: May be ha Skin: May cause irrit Signs and symptom Additional informati	tion: Data not available at this dirritation: Data not available at sensitization: Data not available city: Data not available of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic nt of this product present at levels classifiable as to its carcinogenic procedures not available procedures to minimize potentic armful if inhaled. Material may con- rumful if swallowed. ation and/or burns. tation and/or burns.	at this dilution. le greater than or ity to humans. Is greater than cals known to t lution. ge the chemica I hazards. ause irritation t ble at this diluti	or equal to 0.1% is iden he State of California to I, physical and toxicolog o the tissue of the mucc on.	tified as a carcinoge cause cancer or re ical properties have	en or potential productive toxi e not been tho	carcinogen by OS icity. roughly investigate	
Section 12	Ecological information						
Toxicity to daphnia Toxicity to algae: No Persistence and deg Mobility in soil: No	radability: No data available	s: No data ava Bioaccum PBT and v	ilable iulative potential: No o /PvB assessment: No	lata available data available	r disposal.		
Section 13	Disposal considerations						
	delines are intended for the d different. Dispose of in acco			· · · · ·			
Section 14	Transport information						
UN/NA number: Hazard class: 8 Exceptions: Limi		ng group: 🛙	Hydrochloric acid II	Reportable Qua 2020 ERG Guid		lbs (2270 kg)	Marine pollutant: No
Section 15	Regulatory information						
	to be listed if the CAS number for the						
Compone	nt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hydrochloric acid	<b>0</b>	Listed	5000 lbs (2270 kg)	D002	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 contained	ed herein is furnished without warran	tv of anv kind. Ei	mplovers should use this in	tormation onlv as a su	pplement to othe	er information dathe	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

Identification

# INNOVATING SCIENCE<sup>® by Aldon</sup> 221 Root "Cutting 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 NITRIC ACID, 1 MOLAR SOLUTION	
Synonyms Azotic Acid, Water Solution	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS05 Farget organs: Eyes, Skin, Respiratory system, Teeth Shin corrosion (Category 1A) Eye damage (Category 1)	<ul> <li>Precautionary statement:</li> <li>P260: Do not breathe mist/vapours/spray.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</li> <li>P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P310: Immediately call a POISON CENTER or doctor.</li> <li>P363: Wash contaminated clothing before reuse.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

#### Hazards not otherwise classified:

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

Section 3 Composition / informa	tion on ingredients			
Chemical Name	CAS #	%	EINECS	
Water Nitric acid, 70% solution	7732-18-5 7697-37-2	93.6% 6.4%	231-791-2 231-714-2	
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. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE EYE BURNS. 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 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: 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 away from incompatible substances. Protect from physical damage and sunlight.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Nitric acid	TWA: 2 ppm STEL: 4 ppm	TWA: 2 ppm	TWA: 2 ppm STEL: 4 ppm		

**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	л.							
Section 9	Physical and chemical p	oroperties						
Appearance: Clear to pale yellow liquid.       Evaporation rate (=1): Data not available       Partition coefficient: Data not available         Odor: Irritating, suffocating odor.       Odor threshold: Data not available.       Flammability (solid/gas): Data not available.       Partition coefficient: Data not available         Ddor threshold: Data not available.       Flammability (solid/gas): Data not available.       Partition coefficient: Data not available         pH: <1 (1% solution)							: Data not available I <b>re:</b> Data not available. ble. e	
Section 10	Stability and reactivity							
Chemical stability Conditions to avo	<ul> <li>y: Stable</li> <li>bid: Containers may burst when</li> </ul>		ous polymerization: W ntact with water.	Vill not occur.				
Incompatible mate	erials: Reacts with a wide varie	ty of metals (espe	cially when powdered),	bases, carbides, su	llfides, fulminat	tes, picrates, turp	pentine and combustible mater	
Hazardous decom	nposition products: Nitrogen c	oxides and hydroge	en gas.					
Section 11	Toxicological informatio	n						
IARC: No compone OSHA: No compor Ca Prop 65: This p	Data not available ent of this product present at leve ent of this product present at lev nent of this product present at le product does not contain any che	els greater than or vels greater than c	equal to 0.1% is identif or equal to 0.1% is identi	ied as probable, po ified as a carcinoge	ssible or confir n or potential o	med human card carcinogen by OS	0,	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading to	g sensation, cough, labored brea roat, abdominal pain, burning se ı burns, pain, yellow staining of tl	nsation in the thro he skin. be delayed. Large	at and chest, vomiting, s doses may cause: conv	shock or collapse. version of hemoglol	pin to methemo	oglobin, producin	ng cyanosis, marked fall in bloc	
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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.

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Section 1

Identification

#### INNOVATING SCIENCE® by Aldon 221 Roc Avon. N

"Cutting 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 SULI	FURIC ACID, 1 Molar (2 NORMAL) SOLUTION
Synonyms Sulfu	rric Acid, Water Solution (1M / 2N)
Section 2	Hazards identification
Signal word: DAN Pictograms: GHS Target organs: Re	008 / GHS05       P260: Do not breatherms/vapours/spray.         pespiratory system, skin, eyes, teeth.       P264: Wash hands thoroughly after handling.         P264: Wash hands thoroughly after handling.       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.         P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for
H290: May be corro	(Category 1)       P310: Immediately call a POISON CENTER or doctor.         regory 1A)       P305+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remotion contact lenses, if present and easy to do. Continue rinsing.         gory 1)       P403+P233: Store in a well-ventilated place. Keep container tightly closed.         ation: Hazard statement(s):       P405: Store locked up.         psive to metals.       P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.         subserve skin burns and eye damage.       Patterner

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients				
Chemical Name		CAS #	%	EINECS	
Water Sulfuric acid		7732-18-5 7664-93-9	94.76% 5.23%	231-791-2 231-639-5	
Section 4	First aid measures		1	1	

**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. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **EYE CONTACT:** CAUSES SERIOUS 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 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: Product is a water reactive material, DO NOT USE WATER! Use dry chemicals only for extinguishing.

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. Use water on combustibles burning in vicinity of acid but use care as water applied to the acid results in severe generation of heat and may cause boiling and splattering. Sulfuric acid will not burn, but is capable of igniting finely divided combustible materials on contact. May react violently with organic materials and water with the evolution of heat. Contact with reactive metals, e.g. aluminum, may result in the generation of flammable 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. Hygroscopic material. Never add water to this solution, always add acid, slowly and in small amounts to water to avoid splattering.

Section 8	Exposure controls / personal protection							
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
Exposure Limits.	Sulfuric acid							

Engineering controls: Facilities storing or utilizing this material should be equipped with an evewash 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: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties Appearance: Clear to slightly cloudy liquid. Evaporation rate (Water = 1): <1 Partition coefficient: Data not available Odor: Slightly pungent odor. Flammability (solid/gas): Data not available. Auto-ignition temperature: Data not available Odor threshold: 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. Vapor density (Air = 1): 0.7 (water) Melting / Freezing point: Approximately 0°C (32°F) (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. Section 10 Stability and reactivity Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Avoid contact with water and heat. Avoid temperatures above 250°C (482°F). Incompatible materials: Alkalies, amines, anhydrides, combustibles, organics, oxidizers, powdered metals. Hazardous decomposition products: Sulfur trioxide and/or sulfur dioxide. Hydrogen gas by reaction with metals. Section 11 Toxicological information Acute toxicity: Oral-rat LD50: 2140 mg/kg ; Inhalation-rat LC50: 510 mg/m3/2 hours (Sulfuric acid) Skin corrosion/irritation: Skin-rabbit - causes burns (Sulfuric acid) Serious eye damage/irritation: Eyes-rabbit - causes burns (Sulfuric acid) Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: This product contains a chemical known to be a human carcinogen. (Sulfuric acid) IARC classified: Group 1: Carcinogenic to humans. [Acid mists, strong inorganic] 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. CA Prop 65: A WARNING! This product can expose you a chemical, Strong inorganic acid mists containing sulfuric acid, which is known to the State of California to cause cancer 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: Inhalation of this material is irritating and/or corrosive to the nose, throat and lungs. It may also cause burns to the respiratory tract with the production of lung edema which can result in shortness of breath, wheezing, choking, chest pain and impairment of lung function. Inhalation of high concentrations may result in permanent lung damage. Repeated inhalation may cause bronchitis, and also etching of dental enamel followed by the erosion of the enamel and dentine with loss of tooth substance. Ingestion: Ingestion may cause irritation and/or burns to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Skin: Skin contact can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Eyes: Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage Signs and symptoms of exposure: Burning sensation, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Additional information: RTECS #: WS5600000 (Sulfuric acid) Section 12 Ecological information Toxicity to fish: LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h (Sulfuric acid) Toxicity to daphnia and other aquatic invertebrates: Crangon crangon (crustacea) 70-80 mg/l/48 hours (Sulfuric acid) Toxicity to algae: No data available 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. Transport information Section 14 UN/NA number: UN2796 Shipping name: Sulfuric acid Hazard class: 8 Packing group: || Reportable Quantity: 1,000 lbs (454 kg) Marine pollutant: No Exceptions: Limited quantity equal to or less than 1 L 2020 ERG Guide # 157 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 Component TSCA CERLCA (RQ) RCRA code CA Prop 65 Sulfuric acid Listed 1000 lbs (454 kg) D002 Listed Not listed A WARNING -Cancer www.P65Warnings.ca.gov. 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 Form 06/2015

# **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

#### INNOVATING SCIENCE<sup>®</sup> by Aldon 221 rows Auron N

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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 CALCIUM NITRATE, 0.1 MOLAR SOLUT	ON		
Synonyms Calcium Nitrate, Water Solution			
Section 2 Hazards identification			
Signal word: WARNING Pictograms: GHS07 Target organs: Blood GHS Classification: Acute toxicity, oral (Category 5) Skin irritation (Category 2) Eye irritation (Category 2B) GHS Label information: Hazard statement(s): H303: May be harmful if swallowed. H315: Causes skin irritation. H320: Causes eye irritation. H320: Causes eye irritation. H320: Causes of therwise classified: Health hazards not otherwise classified (HHNOC) - Not I Physical hazards not otherwise classified (PHNOC) - Not I		P264: Wash P280: Wear P302+P352: P332+P313: P361+P364: P305+P351- contact lens; P337+P313:	In y statement(s): hands thoroughly after handling. protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical attention. Take off immediately all contaminated clothing and wash it before reuse. P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove as, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. POISON CENTER or doctor if you feel unwell.
Section 3 Composition / information on	ingredients		
Chemical Name	CAS #	%	EINECS

	· · · · <b>J</b> · · · · ·	1		
Chemical Name	CAS #	%	EINECS	
Water	7732-18-5	97.64%	231-791-2	
Calcium nitrate, tetrahydrate	13477-34-4	2.36%	233-332-1	
-				
Or other A First sides source				
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									
Section 9	Physical and chem								
pH: Data not avail Melting / Freezing po	Data not available. ilable. int: Approximately 0°C (32°F) (v proximately 100°C (212°F) (w	vater) Relative density vater) Relative density	te (Water = 1): <1 solid/gas): Data not i ts: Lower / Upper: [ e (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appr Complete in water.	Data not available r)	Auto-ignitio Decomposit Viscosity: [ Molecular fo	•	: Data not available re: Data not available. ble. e		
Section 10	Stability and reacti	ity and reactivity							
Chemical stability Conditions to avo	y: Stable oid: Excessive temperatur		us polymerization: \	Will not occur.					
ncompatible ma	terials: Ammonia, hydrozi	ne and other reducing age	ents.						
Hazardous decor	nposition products: Nitro	ogen oxides.							
Section 11	Toxicological infor								
Skin corrosion/ir Serious eye dam Respiratory or sk Germ cell mutag Carcinogenity: D NTP: No compone IARC: No compon OSHA: No	ent of this product present a uent of this product present nent of this product present product does not contain a <b>xicity</b> : Data not available <b>xposure</b> : Data not available <b>d</b> : Data not available <b>dffects</b> : e harmful if inhaled. e harmful if swallowed.	e vailable ot available at levels greater than or e at levels greater than or at at levels greater than or ny chemicals known to the ole	equal to 0.1% is identi equal to 0.1% is iden	fied as probable, pos tified as a carcinogen	sible or confirm or potential ca	ed human card rcinogen by OS			
Eyes: Contact wit Signs and sympt not available. Exe Additional inform Section 12 Foxicity to fish: 1	h eyes may cause irritation oms of exposure: To the ercise appropriate procedur nation: RTECS #: EW300 Ecological informa No data available	n. best of our knowledge th res to minimize potential h 00000 [Calcium nitrate] <b>tion</b>	nazards.	nd toxicological prop	erties have not	been thorough	ly investigated. Specific data		
Eyes: Contact wit Signs and sympt not available. Exe Additional inform Section 12 Foxicity to fish: 1 Foxicity to fish: 1 Foxicity to algae: Persistence and 6 Mobility in soil: 1	h eyes may cause irritation coms of exposure: To the ercise appropriate procedur hation: RTECS #: EW300 Ecological informa No data available hia and other aquatic inver No data available degradability: No data available	n. best of our knowledge th res to minimize potential h 00000 [Calcium nitrate] tion ertebrates: No data availa ertebrates: No data availa ertebrates: Mo data availa	azards. able lative potential: No PVB assessment: No	data available o data available		been thorough	ly investigated. Specific data		
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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting 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 SC	ODIUM OXALATE, 0.1 MOLAR SOLUTION				
Synonyms So	ns Sodium Oxalate, Aqueous Solution				
Section 2	Hazards identification				
GHS Classificat Skin irritation (Ca Eye irritation (Ca	Cardiovascular system, Central nervous system, Liver, Kidneys	Precautionary statement:         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.         P362+P364: Take off contaminated clothing and wash it before reuse.         P305+P351:HP338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         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	
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	·	

#### 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: 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 Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	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.

approved respirator	•								
Section 9	Physical and chemic	cal properties							
	Data not available. able. nt: Approximately 0°C (32°F) (wa roximately 100°C (212°F) (wa	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-ignit Decompos Viscosity: Molecular	coefficient: Data ion temperature: sition temperatur Data not availabl formula: Mixture weight: Mixture	Data not availabl re: Data not availa le.		
Section 10	Stability and reactivi	ity							
Incompatible mate	: Stable id: Excessive temperature erials: Strong oxidizers and position products: Carbo	s which cause evapora d acids.	ous polymerization: tion.	Will not occur.					
Section 11	Toxicological inform	ation							
Carcinogenity: Da NTP: No componer IARC: No componer OSHA: No compone Ca Prop 65: This pr Reproductive toxi STOT-repeated ex Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be Skin: May cause in Eyes: Causes irrita Signs and sympto not available. Exer	nt of this product present at ent of this product present a roduct of this product present roduct does not contain any city: Data not available sure: Data not available focus: harmful if inhaled. harmful if swallowed. ritation. ation. oms of exposure: To the b roise appropriate procedure	at levels greater than or at levels greater than o y chemicals known to th e best of our knowledge th ts to minimize potential	equal to 0.1% is iden r equal to 0.1% is iden e State of California t ne chemical, physical	ified as probable, pos tified as a carcinoger o cause cancer or rep and toxicological prop	sible or confii n or potential o roductive toxi	rmed human carci carcinogen by OS icity. ot been thoroughly	HA.	ecific data is	
Section 12	ation: RTECS #: KI17500 Ecological information								
Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gu	a and other aquatic inver No data available egradability: No data ava	ilable Bioaccum PBT and v zard cannot be exclude tions r the disposal of cata n accordance with al	ulative potential: No PvB assessment: N d in the event of unpro log-size quantities o	o data available ofessional handling or only. Federal regula	ations may a				
	Not applicable	Shipping name: N	0						
Hazard class: N	vot applicable	Packing group: IN	lot applicable	Reportable Qua	ntity: No	Ma	rine pollutant:	No	
	ot applicable	2020 ERG Guide #		Reportable Qua	ntity: No	Ma	rine pollutant:	No	
Hazard class: N Exceptions: No Section 15	ot applicable Regulatory informat	2020 ERG Guide # ion	Not applicable	Reportable Qua	ntity: No	Ma	rine pollutant:	No	
Hazard class: N Exceptions: No Section 15	ot applicable Regulatory informat red to be listed if the CAS numl	2020 ERG Guide # ion	Not applicable	Reportable Qua	ntity: No DSL	Ma	rine pollutant: CA Pro		

#### 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. Form 06/2015

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Section 1

Identification

# INNOVATING SCIENCE<sup>® by Aldon</sup> 221 Root "Cutting 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 NITRIC ACID, 1 MOLAR SOLUTION	
Synonyms Azotic Acid, Water Solution	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS05 Farget organs: Eyes, Skin, Respiratory system, Teeth Shin corrosion (Category 1A) Eye damage (Category 1)	<ul> <li>Precautionary statement:</li> <li>P260: Do not breathe mist/vapours/spray.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</li> <li>P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P310: Immediately call a POISON CENTER or doctor.</li> <li>P363: Wash contaminated clothing before reuse.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

#### Hazards not otherwise classified:

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

Section 3 Composition / informa	tion on ingredients			
Chemical Name	CAS #	%	EINECS	
Water Nitric acid, 70% solution	7732-18-5 7697-37-2	93.6% 6.4%	231-791-2 231-714-2	
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. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE EYE BURNS. 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 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: 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 away from incompatible substances. Protect from physical damage and sunlight.

Section 8	Exposure controls / personal protection							
Exposure Limiter	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
Exposure Limits:	Nitric acid	TWA: 2 ppm STEL: 4 ppm	TWA: 2 ppm	TWA: 2 ppm STEL: 4 ppm				

**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	л.							
Section 9	Physical and chemical p	oroperties						
Odor: Irritating, su Odor threshold: E pH: <1 (1% solution	ar to pale yellow liquid. iffocating odor. Data not available. on) <b>point:</b> Data not available. ta not available.	Evaporation r Flammability Explosion lim Vapor pressur Vapor density Relative densi	ate ( = 1): Data not av (solid/gas): Data not av its: Lower / Upper: Data re (mm Hg): Data not av (Air = 1): Data not ava ity (Specific gravity): 1 : Soluble in water.	vailable. ata not available available. ailable	Auto-igniti Decompos Viscosity: Molecular		: Data not available I <b>re:</b> Data not available. ble. e	
Section 10	Stability and reactivity							
Chemical stability Conditions to avo	<ul> <li>y: Stable</li> <li>bid: Containers may burst when</li> </ul>		ous polymerization: W ntact with water.	Vill not occur.				
Incompatible mate	erials: Reacts with a wide varie	ty of metals (espe	cially when powdered),	bases, carbides, su	llfides, fulminat	tes, picrates, turp	pentine and combustible mater	
Hazardous decom	nposition products: Nitrogen c	oxides and hydroge	en gas.					
Section 11	Toxicological informatio	n						
IARC: No compone OSHA: No compor Ca Prop 65: This p	Data not available ent of this product present at leve ent of this product present at lev nent of this product present at le product does not contain any che	els greater than or vels greater than c	equal to 0.1% is identif or equal to 0.1% is identi	ied as probable, po ified as a carcinoge	ssible or confir n or potential o	med human card carcinogen by OS	0,	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading to	g sensation, cough, labored brea roat, abdominal pain, burning se ı burns, pain, yellow staining of tl	nsation in the thro he skin. be delayed. Large	at and chest, vomiting, s doses may cause: conv	shock or collapse. version of hemoglol	pin to methemo	oglobin, producin	ng cyanosis, marked fall in bloc	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading to Additional inform Section 12	bure: Data not available xposure: Data not available d: Data not available offects: g sensation, cough, labored brea roat, abdominal pain, burning se burns, pain, yellow staining of th ain, burns. oms of exposure: Effects may to collapse, coma, and possibly of the second second second second second second to collapse, coma, and possibly of the second second second second second second second second to collapse, coma, and possibly of the second se	nsation in the thro he skin. be delayed. Large death. Exercise ap	at and chest, vomiting, s doses may cause: com propriate procedures to	shock or collapse. version of hemoglol	pin to methemo	oglobin, producin	ng cyanosis, marked fall in bloc	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore the Skin: Serious skin Eyes: Redness, pr Signs and sympto pressure, leading the Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effor Section 13 These disposal g	besure: Data not available xposure: Data not available d: Data not available offects: g sensation, cough, labored breat roat, abdominal pain, burning set burns, pain, yellow staining of the ain, burns. oms of exposure: Effects may to collapse, coma, and possibly of tation: RTECS #: QU5775000 Ecological information Gambusia affinis (fish, fresh wate ia and other aquatic invertebra No data available degradability: No data available	ensation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>Lo</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No id in the event of unprofe	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul	oin to methemo hazards. r disposal. ations may a	pply to empty c	container. State and/or loca	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore the Skin: Serious skin Eyes: Redness, pr Signs and sympto pressure, leading the Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effor Section 13 These disposal g	besure: Data not available xposure: Data not available transition of available ffects: g sensation, cough, labored breat roat, abdominal pain, burning se burns, pain, yellow staining of the ain, burns. oms of exposure: Effects may to collapse, coma, and possibly of the collegical information Gambusia affinis (fish, fresh wate ia and other aquatic invertebra No data available degradability: No data available to data available test: An environmental hazard Disposal considerations puidelines are intended for the	ensation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>Lo</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No id in the event of unprofe	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul	oin to methemo hazards. r disposal. ations may a	pply to empty c	container. State and/or loca	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading th Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphai Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effo Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: S Exceptions: No	osure:       Data not available         xposure:       Data not available         xposure:       Data not available         offects:       generation, cough, labored breat         roat, abdominal pain, burning set       burns, pain, yellow staining of train, burns.         oms of exposure:       Effects may         to collapse, coma, and possibly of train.       RTECS #: QU5775000         Ecological information       Gambusia affinis (fish, fresh wate ia and other aquatic invertebration)         Gambusia affinis (fish, fresh wate ia and other aquatic invertebration)       No data available         degradability:       No data for the be different.         Disposal considerations       Dispose of in actions         Transport       Information         S       Packing         o exceptions       2020 ER	ensation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>L0</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No id in the event of unprofe alog-size quantities or Il local, state and fede acid <b>Reportat</b>	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul	oin to methemo hazards. r disposal. ations may a contract with	pply to empty c	container. State and/or loca	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading tr Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effo Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: 8 Exceptions: No Section 15	baure: Data not available xposure: Data not available transport information Subala not available transport information transport information	ensation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata cordance with al g name: Nitric group: Il G Guide # 157	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>LO</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No id in the event of unprofi alog-size quantities or Il local, state and fede acid <b>Reportat</b>	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul aral regulations or	oin to methemo hazards. r disposal. ations may a contract with	pply to empty c	container. State and/or loca emical disposal agency.	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading tr Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphni Toxicity to daphni Toxicity to dapha Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effo Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: S Exceptions: No Section 15 A chemical is conside	osure: Data not available         xposure: Data not available         xposure: Data not available         iffects:         g sensation, cough, labored breat         roat, abdominal pain, burning set         aburns, pain, yellow staining of train, burns.         oms of exposure: Effects may         to collapse, coma, and possibly of         tation: RTECS #: QU5775000         Ecological information         Gambusia affinis (fish, fresh water         ta and other aquatic invertebra         No data available         degradability: No data available	Insation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata cordance with al g name: Nitric group: II G Guide # 157 or the anhydrous form	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>LO</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No d in the event of unprofi alog-size quantities or I local, state and fede acid <b>Reportat</b>	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul real regulations or <b>ble Quantity:</b> 1,0	oin to methemo hazards. r disposal. ations may a contract with	pply to empty c a licensed che kg) <b>Ma</b>	container. State and/or loca emical disposal agency. arine pollutant: No	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Burning Ingestion: Sore thi Skin: Serious skin Eyes: Redness, pa Signs and sympto pressure, leading tr Additional inform Section 12 Toxicity to fish: G Toxicity to fish: G Toxicity to daphni Toxicity to daphni Toxicity to algae: Persistence and d Mobility in soil: N Other adverse effo Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: 8 Exceptions: No Section 15	osure: Data not available         xposure: Data not available         xposure: Data not available         iffects:         g sensation, cough, labored breat         roat, abdominal pain, burning set         aburns, pain, yellow staining of train, burns.         oms of exposure: Effects may         to collapse, coma, and possibly of         tation: RTECS #: QU5775000         Ecological information         Gambusia affinis (fish, fresh water         ta and other aquatic invertebra         No data available         degradability: No data available	ensation in the thro he skin. be delayed. Large death. Exercise ap er), LC50 = 72 mg/ ates: Daphnia mag e Bioaccum PBT and v cannot be exclude e disposal of cata cordance with al g name: Nitric group: Il G Guide # 157	at and chest, vomiting, s doses may cause: com propriate procedures to L/96 hours gna (Crustacia), EC <sub>LO</sub> = <b>ulative potential:</b> No c <b>/PvB assessment:</b> No id in the event of unprofi alog-size quantities or Il local, state and fede acid <b>Reportat</b>	shock or collapse. version of hemoglol minimize potential 107 mg/L data available data available essional handling o hly. Federal regul aral regulations or	oin to methemo hazards. r disposal. ations may a contract with	pply to empty c	container. State and/or loca emical disposal agency.	

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.

# GENERAL STORAGE CODE GREEN

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Section 1

Identification

# "Cutting edge science for the classroom" by Aldon "Cutting 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 ALUMINUM METAL	
Synonyms Aluminum ; Aluminum Metal Strips	
Section 2 Hazards identification	
This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. 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	Supplementary information: SHARP EDGES! USE CARE WHEN HANDLING. Do not inhale dust or fumes. 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) - Combustible dust Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on	ingredients			
Chemical Name		CAS #	%	EINECS	
Aluminum strips		7429-90-5	>99.5%	231-072-3	
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: 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: Sand, dry chemical, or CO2 should be used on surrounding fire. Do NOT use water on fire where molten metal is present. Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Reacts with some acids and caustic solutions to produce hydrogen. Molten aluminum may explode on contact with water. It may also react violently with rust, certain metal oxides (e.g. oxides of copper, iron and lead) and nitrates (e.g. ammonium nitrate and fertilizers containing ammonium nitrate).

### 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.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7	Handling and storage	Page E2 of E2
Read label on contain	er before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. U	Jse with

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes. Wash thoroughly after handling. Remove and wash clothing before reuse.

Stor	age:	Store in a coo	l, dry, well-ventilat	ed a	area away	from inco	mpatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
	Aluminum, metal and insoluble compounds	TWA: 1 mg/m <sup>3</sup> (A4) Respirable fraction	TWA: 5 mg/m <sup>3</sup> Respirable fraction	TWA: 5 mg/m <sup>3</sup> Respirable fraction			

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemical pr	operties					
Odor: No odor. Odor threshold: Da pH: Data not availab	ole. point: 660°C (1220°F) not available	Flammability Explosion lim Vapor pressu Vapor density	ate (=1): Not applic (solid/gas): Not appli its: Lower / Upper:   re (mm Hg): Data not (Air = 1): 0.95 - 0.11 ity (Specific gravity): : Insoluble	cable Not applicable : available 3 lb/in <sup>3</sup>	Auto-igniti Decompos Viscosity: Molecular		: Not applicable i <b>re:</b> Data not available.
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoid	Stable : Excessive temperatures and		ous polymerization:	Will not occur.			
Incompatibilities wi	th other materials: Strong oxid	dizers, mineral a	cids, strong alkalies, h	alogenated hydrocarl	bons, and wate	er.	
Hazardous decomp	osition products: Reacts with	water (in molten	form), acids or alkalie	s to generate hydrog	jen gas.		
Section 11	Toxicological information						
Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No componen Ca Prop 65: This pro Reproductive toxic STOT-single exposs STOT-repeated exp Aspiration hazard: Potential health effi Inhalation: Inhalation Ingestion: May be h Skin: Sheets have s Eyes: Contact with e Signs and symptom physical and toxicolo	ation: Data not available e/irritation: Data not available sensitization: Data not available icity: Data not available a not available of this product present at levels t of this product present at level duct does not contain any chen ity: Data not available osure: Data not available Data not available ects: n of dust or fumes may irritate re	greater than or or s greater than or ls greater than o nicals known to th espiratory system ts or scratches. ported that chror	equal to 0.1% is ident r equal to 0.1% is iden e State of California to n. May cause irritation. ic exposure has been	ified as probable, po- tified as a carcinoge o cause cancer or rep suspected of causing	ssible or confir n or potential o productive toxi g lung injury.	med human card carcinogen by OS city. Fo the best of our	SHA.
Section 12	Ecological information						
Toxicity to daphnia Toxicity to algae: So Persistence and de Mobility in soil: No	mo trutta (Fish, Fresh water, ma and other aquatic invertebrat elenastrum capricornutum (Alga gradability: No data available	es: Daphnia mag e) NOEC: >100 i Bioaccum PBT and v	na (Črustacea) NOEC ng/l/72 hours <b>ulative potential:</b> No <b>PvB assessment:</b> No	data available o data available			
Section 13	Disposal considerations						
regulations may be	delines are intended for the different. Dispose of in acc						
Section 14	Transport information						
UN/NA number: Hazard class: No Exceptions: Not	ot applicable Pack	ping name: 1 king group: N ERG Guide #	0	Reportable Qua	antity: No	Ма	arine pollutant: No
Section 15	Regulatory information						
	d to be listed if the CAS number for	the anhydrous form	is on the Inventory list.				
Compone	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Aluminum		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	ntv of any kind Er	nplovers should use this i	nformation only as a su	ipplement to othe	er information dath	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

# GENERAL STORAGE CODE GREEN

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Section 1

Identification

#### INNOVATING SCIENCE<sup>®</sup> by Aldon 221 ROM AVION N

"Cutting 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 ZINC METAL	
Synonyms Zinc / Zinc Metal Strips	
Section 2 Hazards identification	
This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. 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 Mazards not otherwise classified:	Supplemental information: SHARP EDGES! ABRASIVE TO SKIN. USE CARE WHEN HANDLING. Do not breathe dust. 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.

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

Section 3	Composition / information on	ingredients			
Chemical Name		CAS #	%	EINECS	
Zinc, strip		7440-66-6	100%	231-175-3	
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:** HARMFUL IF INHALED AS FUME. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **EYE CONTACT:** MAY CAUSE MECHANICAL 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 DERMATITIS. 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 triclass, dry chemical fire extinguisher. Do NOT use water on fire where molten metal is present.

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. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Small chips, turnings, and dust with ignite readily. Dust cloud may be explosive.

### 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.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7	Hand	ling ai	nd sto	orage								Pa	ge E2 of	E2
<b>D</b>			-			 		 	1 17		e			

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes from molten metals. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, dry, 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.	Particulates not otherwise classified	None established	TWA: 5 mg/m <sup>3</sup> respirable fraction	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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemical pro	operties					
Appearance: Solid. N Odor: No odor. Odor threshold: Data pH: Data not available Melting / Freezing point: Boiling point: 907°C Flash point: Not appli	not available. : 419°C (787°F) (1665°F)	Flammability ( Explosion limi Vapor pressur Vapor density	ate ( = 1): Not applia solid/gas): Not appli ts: Lower / Upper: e (mm Hg): Data not (Air = 1): Data not ar ty (Specific gravity): : Insoluble	cable Not applicable available vailable	Auto-igniti Decompos Viscosity: Molecular		: Not applicable i <b>re:</b> Data not available.
Section 10	Stability and reactivity						
Incompatibilities with	table Excessive temperatures. Hyd other materials: Strong acid sition products: Zinc oxides	drogen may evolv ds, halogens, acio	ds, alkalies and water	h water or damp air.	erate hydroge	n gas.	
Section 11	Toxicological information						
Serious eye damage/ Respiratory or skin se Germ cell mutagenici Carcinogenity: Data a NTP: No component of IARC: No component CoSHA: No component Ca Prop 65: This produ Reproductive toxicity STOT-single exposur STOT-repeated expose Aspiration hazard: D Potential health effec Inhalation: Inhalation of Ingestion: May be harn Skin: May cause derm Eyes: Contact with eye Signs and symptoms	on: Data not available irritation: Data not available ensitization: Data not available ensitization: Data not available not available if this product present at levels of this product present at level of this product present at level if the product present at level if the product present at level if dust or torta vailable ts: if dust or fume may cause irritat mful if swallowed. the product present at level if the product present at leve	greater than or e s greater than or ils greater than ou ilcals known to th tion to eyes, nose ation. of alloy can produ	equal to 0.1% is ident r equal to 0.1% is iden e State of California to e, throat, and cause a	ified as probable, pos ntified as a carcinogen o cause cancer or rep metallic taste in the m	ssible or confir n or potential d productive toxi nouth. May ca	rmed human carc carcinogen by OS city. use metal fume fo	0,
Section 12	Ecological information						
Toxicity to fish: No da Toxicity to daphnia ar Toxicity to algae: No d Persistence and degr Mobility in soil: No da	ata available nd other aquatic invertebrate data available adability: No data available	Bioaccum PBT and v	ulative potential: No PvB assessment: No	o data available	r disposal.		
Section 13	Disposal considerations						
regulations may be c	lifferent. Dispose of in acco	disposal of cata ordance with all	log-size quantities of local, state and fed	only. Federal regulations or	ations may a contract with	pply to empty c a licensed che	ontainer. State and/or local mical disposal agency.
	Transport information	· .					
UN/NA number: N Hazard class: Not Exceptions: Not a	applicable Pack	ping name: N ing group: N ERG Guide #	0	Reportable Qua	antity: No	Ma	arine pollutant: No
-	Regulatory information						
A chemical is considered t	o be listed if the CAS number for						
Componen	t	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Zinc		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 contained	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 gathe	ered by them and must make indepen

on only as a ependent 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

Section 1

Identification

### INNOVATING SCIENCE<sup>®</sup> by Aldon 221 Rev of Ward N

"Cutting 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 COPPER METAL	
Synonyms Copper Metal Foil / Copper Foil	
Section 2 Hazards identification	
This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Signal word: Not classified Pictograms: Not classified Target organs: Liver, Kidneys GHS Classification: Not classified GHS Label information: Hazard statement(s): Not classified Precautionary statement(s): Not classified	Supplemental information: SHARP EDGES! ABRASIVE TO SKIN. USE CARE WHEN HANDLING. Do not breathe dust or fume. 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	
Copper metal		7440-50-8	100%	231-159-6	
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: HARMFUL IF INHALED AS FUME. 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 triclass, dry chemical fire extinguisher. Do NOT use water on fire where molten metal is present.

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. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents.

### 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.

**Containment and Cleanup:** Recover for reuse if not contaminated. Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

ection 7	Handling and	storage			Page E2 of E2
and label on contain	or boforo uning	Do not wear contact lances when working with chemicals	Keen container tightly closed	Keen out of reach of children	Lloo with

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes from molten metals. Wash thoroughly after handling. Remove and wash clothing before reuse.

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

Section 8	Exposure controls / personal prot	ection			L
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Emilio.	Copper, dusts and mists, as Cu	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	

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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Physical and chemical p	roperties	
Appearance: Solid. Red-brown, lustrous metal. Turns green on exposure to moist air. Odor: No odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 1083°C (1981°F) Boiling point: 2595°C (4703°F) Flash point: Not applicable	Evaporation rate (=1): Not applicable Flammability (solid/gas): Not applicable Explosion limits: Lower / Upper: Not applicable Vapor pressure (mm Hg): 1 mm @ 1628°C Vapor density (Air = 1): Data not available Relative density (Specific gravity): 8.92 @ 20°C Solubility(ies): Insoluble	Partition coefficient: Data not available Auto-ignition temperature: Not applicable Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Cu Molecular weight: 63.55
Section 10 Stability and reactivity		

Chemical stability: Stable

S

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures and heat. Incompatibilities with other materials: Strong oxidizers may cause a violent reaction.

Hazardous decomposition products: At temperatures above melting point, toxic fumes or vapors may be emitted.

#### Section 11 Toxicological information Acute toxicity: Data not available 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. 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. Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. 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: Inhalation of dust or fumes may irritate respiratory system. Symptoms include cough, headache, sore throat, shortness of breath. Ingestion: May be harmful if swallowed. Symptoms include abdominal pain, nausea, vomiting. Skin: May cause irritation and redness. Eyes: Contact with eyes may cause redness and pain. Signs and symptoms of exposure: Over-heating of alloy can produce metal fumes and oxides. Fumes of copper may cause metal fume fever with flu-like symptoms and skin and hair discolorization. Copper dust and fume cause irritation of the upper respiratory tract, metallic taste in the mouth, and nausea. Chronic poisoning results in Wilson's disease characterized by a hepatic cirrhosis, brain damage, denyelination, renal disease and copper depostion in the cornea. Additional information: RTECS #: GL5325000 Section 12 **Ecological information** Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebrates: No data available Toxicity to algae: No data available Persistence and degradability: No data available Bioaccumulative potential: No data available PBT and vPvB assessment: No data available Mobility in soil: 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.

regulatione may be	alliorent. Diopece e		in loodi, otato ana loa	iorar rogalationo ol	oomaaot man		simoar alopooar agomoy.
Section 14	Transport informa	tion					
UN/NA number: Hazard class: No Exceptions: No	ot applicable	Shipping name: Packing group: 2020 ERG Guide :	Not applicable	Reportable Qu	antity: No	М	arine pollutant: No
Section 15	Regulatory information	ation					
A chemical is considere	d to be listed if the CAS nu	mber for the anhydrous for	m is on the Inventory list.				
Compone	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Copper		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						
dent determinations of	suitability and completenes ency for Research on Cance	s of information from all so	urces to assure proper use	of these materials and	the safety and h	ealth of employee	ered by them and must make indepen- s. NTP: National Toxicology Program, oosure, RE: Repeated Exposure,

# FLAMMABLE STORAGE CODE RED

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Section 1

Identification

# INNOVATING SCIENCE<sup>® by Aldon</sup> 221 Root "Cutting 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	MAGNESIUM METAL, RIBBON	
Synonyms	Magnesium	
Section 2	Hazards identification	
Pictograms	<b>I:</b> WARNING : GHS02 <b>ns:</b> None known	<b>Precautionary statement:</b> P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
GHS Classi Flammable s	fication: solid (Category 2)	
GHS Label H228: Flamr	information: Hazard statement: nable solid.	

#### Hazards not otherwise classified:

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

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
Magnesium		7439-95-4	99.8%	231-104-6			
Ū							
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 only graphite powder, soda ash, powdered sodium chloride, or an appropriate metal-fire-extinguishing dry powder. DO NOT use water, carbon dioxide, or foam!

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.

Specific Hazards: When heated in air to a temperature near its melting point, magnesium may ignite and burn. Dangerous in the form of dust or flakes and when exposed to flame or by violent chemical reaction with oxidizing agents. Magnesium may react with moisture or acids to evolve hydrogen gas, which is a highly dangerous fire or explosion hazard.

#### 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.

Containment and Cleanup: Remove all sources of ignition. Using non-sparking tools, sweep up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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 dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

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

Section 8	Exposure controls / personal prot	ection			
Exposure Limits:	Chemical Name ACGIH (TLV)		OSHA (PEL)	NIOSH (REL)	
	Magnesium	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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator	•						
Section 9	Physical and chemical prop	erties					
Odor: No odor. Odor threshold: D pH: Data not availa	ata not available.         F           ble.         V           point:         651°C (1203.8°F)           V°C (2030°F)         F	lammability (s xplosion limits /apor pressure /apor density ( Relative density	e ( = 1): Data not av olid/gas): Data not a s: Lower / Upper: D (mm Hg): 1 mm @ 6 Air = 1): Data not ava (Specific gravity): 1.7 Negligible in water.	vailable. ata not available i21°C iilable	Auto-igniti Decompos Viscosity: Molecular	oefficient: Data ion temperature: sition temperature Data not availab formula: Mg weight: 24.31	510°C (950°F) r <b>e∶</b> Data not available.
Section 10	Stability and reactivity						
Incompatible mate	Stable d: Excessive temperatures, heat, s rials: Magnesium will react with wa position products: Hydrogen.	parks, open flar		of ignition.	chlorine, bron	nine, iodine and o	xidizing agents.
Section 11	Toxicological information						
Serious eye damag Respiratory or skii Germ cell mutager Carcinogenity: Da NTP: No componen IARC: No componen OSHA: No componen Ca Prop 65: This pr Reproductive toxis STOT-single expose STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: Inhalation Ingestion: Ingestion Skin: Particles imbo Eyes: Contact with Signs and sympto chills, nausea, vomi	t of this product present at levels gu nt of this product present at levels g ent of this product present at levels oduct does not contain any chemic city: Data not available sure: Data not available posure: Data not available : Data not available	reater than or eq greater than or e greater than or als known to the nortness of brea nouth and may c ons. Molten ma eal scratches. A gnesium oxide fu	qual to 0.1% is identif equal to 0.1% is identif State of California to th. ause abdominal pain gnesium may cause s woid direct viewing of ume subsequent to bu	ied as probable, pos ified as a carcinoger cause cancer or rep and diarrhea. erious skin burns. magnesium fires as rning can result in n	ssible or confi n or potential productive tox	rmed human carc carcinogen by OS icity. ay result, use fire rer. The temporal	glasses. y symptoms can include fever,
Section 12	Ecological information						
Toxicity to algae: N Persistence and de Mobility in soil: No Other adverse effe	a and other aquatic invertebrates No data available agradability: No data available o data available cts: An environmental hazard cann	Bioaccumul PBT and vP	ative potential: No o vB assessment: No	data available	disposal.		
Section 13	Disposal considerations						
	idelines are intended for the dis e different. Dispose of in accord Transport information						
UN/NA number: Hazard class: 4	UN1869 Shipping na		Reporta	ble Quantity: No G Guide # 138	)	Ma	rine pollutant: No
Section 15	Regulatory information						
	ed to be listed if the CAS number for the		•				
Compon	lent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Magnesium		Listed	Not listed	D001	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 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.