## **GENERAL STORAGE CODE GREEN**

Page E1 of E2

Section 1

Identification

### INNOVATING SCIENCE<sup>®</sup> by Aldon 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	ALUMINUM METAL	
Synonyms	Aluminum ; Aluminum Metal	
Section 2	Hazards identification	
to the Globall Chemicals. Signal word: Pictograms: Target organs GHS Classific GHS Label inf		Supplementary information: 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 Co	Composition / information on ingredients					
Chemical Name		CAS #	%	EINECS		
Aluminum		7429-90-5	>99.5%	231-072-3		
Section 4 Fir	st aid measures			1		

**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 CO<sub>2</sub> 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: Recover for reuse if not contaminated. 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 E
Read label on containe	er 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 dust or fumes. 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.	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 p	roperties						
Appearance: Solid. Silver-grey metallic granules Odor: No odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 660°C (1220°F) Boiling point: Data not available Flash point: Not applicable	Evaporation rate (=1): Not applicable Flammability (solid/gas): Not applicable Explosion limits: Lower / Upper: Not applicable Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): 0.95 - 0.113 lb/in <sup>3</sup> Relative density (Specific gravity): Data not available Solubility(ies): Insoluble	Partition coefficient: Data not available Auto-ignition temperature: Not applicable Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Al Molecular weight: 26.98					
Section 10 Stability and reactivity							
Chemical stability: Stable Conditions to avoid: Excessive temperatures and	Chemical stability: Stable       Hazardous polymerization: Will not occur.         Conditions to avoid: Excessive temperatures and heat.						
Incompatibilities with other materials: Strong ox	idizers, mineral acids, strong alkalies, halogenated hydrocarb	ons, and water.					
Hazardous decomposition products: Reacts wit	h water (in molten form), acids or alkalies to generate hydroge	n gas.					
Section 11 Toxicological information	n						
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 a 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 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. Interaction: May the hortrofit if carolinguad							

Ingestion: May be harmful if swallowed.

Skin: May cause irritation.

Eyes: Contact with eyes may cause irritation.

Signs and symptoms of exposure: It has been reported that chronic exposure has been suspected of causing lung injury. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards. Additional information: RTECS #: BD0330000

#### 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 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. Contion 14 Transport information

Occuon 14	mansport informat						
UN/NA number: Hazard class: No Exceptions: Not	ot applicable	Shipping name: N Packing group: No 2020 ERG Guide #	ot applicable	Reportable Qu	antity: No	Ма	arine pollutant: No
Section 15	Regulatory informa	tion					
A chemical is considered	to be listed if the CAS num	ber for the anhydrous form i	is on the Inventory list.				
Compone	nt	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
0							reproductive toxicity.
Section 16	Other information						
dent determinations of s	uitability and completeness	of information from all source	es to assure proper use	of these materials and	the safety and h	ealth of employees	ered by them and must make indepen 5. NTP: National Toxicology Program, psure, RE: Repeated Exposure,

ERG: Emergency Response Guidebook Form 06/2015

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## **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

# INNOVATING SCIENCE

"Cutting edge science for the classroom"

<sup>®</sup> by 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 PELLITIZED ACTIVATED CARBON						
Synonyms None						
Section 2 Hazards identification						
Signal word: WARNING Pictograms: GHS07 Target organs: Respiratory system, Eyes GHS Classification: Eye irritation (Category 2B) STOT (Category SE 3) GHS Label information: Hazard statement: H320: Causes eye irritation. H335: May cause respiratory irritation.		P264: Wash P271: Use of P280: Wear P304+P340: breathing. P305+P351: contact lens P312: Call a P403+P233: P405: Store P501: Dispo	<ul> <li>Precautionary statement:</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P271: Use only outdoors or in a well-ventilated area.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</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>P312: Call a POISON CENTER or doctor if you feel unwell.</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>			
<u>Hazards not otherwise classified:</u> Health hazards not otherwise classified (HHNOC) - Combustible dust			der the UN classification for activated carbon, all activated carbons identified as a class 4.2 product. However, this product has been tested o the United Nations Transport of Dangerous Goods test protocol for a g substance" (United Nations Transportation of Dangerous Goods, Manual d Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self-bstances) and it has been specifically determined that this product does e definition of a self-heating substance (class 4.2) or any other hazard herefore should not be listed as a hazardous material. This information is only for the Activated Carbon Product identified in this document.			
Physical hazards not otherwise classified (PHNOC) - Not						
Section 3 Composition / information on	ingredients					
Chemical Name	CAS #	%	EINECS			
Carbon	7440-44-0	100%	231-153-3			

#### Section 4 First aid measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting unless directed to do so by medical personnel.

INHALATION: MAY CAUSE RESPIRATORY IRRITATION. Remove person to fresh air. If not breathing, administer CPR or artifical respiration. Get immediate medical attention.

EYE CONTACT: CAUSES SERIOUS EYE DAMAGE. Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. If skin reddening or irritation develops, seek medical attention.

#### Section 5 Fire fighting measures

Suitable Extinguishing Media: In case of fire, flood with plenty of water.

Protective Actions for Fire-fighters: Firefighters should wear full protective gear.

Specific Hazards: Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, etc. may result in fire.

#### Section 6 Accidental release measures

Personal Precautions: Use proper personal protective equipment as indicated in Section 8. Avoid contact with the skin and eyes.

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

Containment and Cleanup: Remove all sources of ignition. Shovel or sweep up and place in closed container for proper disposal. Wash spill area with soap and water.

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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes. Do not inhale dusts. Use with adequate ventilation. Wet activated carbon removes oxygen from air causing severe hazard to workers inside carbon bessels or confined space. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Protect containers from physical damage. Store in dry, cool, well-ventilated area.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	None established	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 dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9	Physical and chemical pro	perties					
Appearance: Solid. Black pellet.Evaporation rate (=1): Data not availablePartition coefficient: Data not availableOdor: Data not available.Flammability (solid/gas): Data not available.Partition coefficient: Data not availableOdor threshold: Data not available.Flammability (solid/gas): Data not available.Partition coefficient: Data not availableDecomposition temperature: Data not availableExplosion limits: Lower / Upper: Data not availableDecomposition temperature: Data not availableMelting / Freezing point: Data not availableVapor density (Air = 1): Data not availableMolecular formula: MixtureBoiling point: Data not available.Solubility(ies): Data not available.Molecular weight: Mixture							: Data not available <b>re:</b> Data not available ile. e
Section 10	Stability and reactivity						
Conditions to avoid Incompatible mater	Stable under normal conditions : None ials: Strong oxidizers and reduc osition products: Carbon mon	0 0	as ozone, liquid oxyg		not occur.		
Section 11	Toxicological information						
Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Not NTP: No component IARC: No component OSHA: No component Ca Prop 65: This pro Reproductive toxici STOT-single expose STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: Material n Ingestion: May be has Skin: May cause skii	Acute toxicity: Oral-rat LD50: >10,000 mg/kg Skin corrosion/irritation: Not classified Serious eye damage/irritation: Causes eye irritation Respiratory or skin sensitization: Not classified Germ cell mutagenicity: Not classified Carcinogenity: Not classified 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 a robable, 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: Not classified STOT-single exposure: May cause respiratory irritation STOT-repeated exposure: Not classified Aspiration hazard: Not classified Potential health effects: Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: May cause skin irritation. Eyes: May cause skin irritation.						
Section 12	Ecological information						
Toxicity to fish: No data available         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         Mobility in soil: No data available         PBT and vPvB assessment: No data available         Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.         Section 13       Disposal considerations							
These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport information							
UN/NA number: Hazard class: No Exceptions: Not Section 15	Not applicable Shipp t applicable Pack applicable 2020 Regulatory information		ot applicable Not applicable	Reportable Qu	antity: No	Ma	arine pollutant: No
A chemical is considered Compone	d to be listed if the CAS number for t nt	ne anhydrous form	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Activated carbon		Listed	Not listed	Not listed	Not Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or

#### 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

of California to cause cancer or reproductive toxicity.

## **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

## by Aldon INNOVATING SCIENCE

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

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

Product SILICON METAL, LUMPS	
Synonyms Silicon Metal	
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: None required Pictograms: No symbol required Target organs: None known GHS Classification: None required GHS Label information: Hazard statement: None required Precautionary statement: None required	Supplemental information: 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.

#### 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	
Silicon metal lumps		7440-21-3	100%	231-130-8	
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 anythin g by mouth to an unconscious person.

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

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

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

#### Section 5 Fire fighting measures

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

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

Specific Hazards: 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: Recover for reuse if not contaminated. 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. 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.

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

approved respirator.							
Section 9	Physical and chemical pr	operties					
Appearance: Solid, n Odor: No odor. Odor threshold: Data pH: Data not available Melting / Freezing po Boiling point: Data n Flash point: Not flam	a not available. e. <b>int:</b> 1440°C (2624°F) iot available	Flammability (s Explosion limit Vapor pressure Vapor density Relative densit	te ( = 1): Data not a solid/gas): Data not is: Lower / Upper: I e (mm Hg): Data not (Air = 1): Data not av y (Specific gravity): Insoluble in water.	available. Data not available available vailable	Auto-ignitio Decomposi Viscosity: I Molecular fe	<b>tion temperatu</b> Data not availab	: Data not available <b>re:</b> Data not available.
Section 10	Stability and reactivity						
Chemical stability: S Conditions to avoid:	Stable Avoid generation of airborne		us polymerization:	Will not occur.			
Incompatible materia	als: Acids and strong bases.						
Hazardous decompo	sition products: None know	n.					
Section 11	Toxicological information						
Skin corrosion/irrita Serious eye damage Respiratory or skin s Germ cell mutagenic Carcinogenity: Data NTP: No component IARC: No component OSHA: No component Ca Prop 65: This proc Reproductive toxicit STOT-single exposu STOT-repeated exposu- Stot-repeated ex	of this product present at levels of this product present at levels of this product present at level to f this product present at level duct does not contain any cher ty: Data not available <b>re:</b> Data not available <b>osure:</b> Data not available Data not available <b>cts:</b> armful if inhaled. rmful if swallowed. ay cause irritation.	ble s greater than or e ls greater than or els greater than or nicals known to th	equal to 0.1% is iden equal to 0.1% is iden e State of California t	tified as probable, po ntified as a carcinoge o cause cancer or re	essible or confirr	ned human carc arcinogen by OS ity.	0,
Section 12	Ecological information						
Toxicity to fish: No of Toxicity to daphnia a Toxicity to algae: No Persistence and deg Mobility in soil: No of Mobility in soil: No of Mobi	data available and other aquatic invertebrat data available radability: No data available	Bioaccumu PBT and vi	Ilative potential: No PvB assessment: N	o data available	r disposal.		
Section 13	Disposal considerations						
These disposal guid regulations may be Section 14	delines are intended for the different. Dispose of in acc <b>Transport information</b>	disposal of cata ordance with all	og-size quantities of local, state and fee	only. Federal regul leral regulations or	lations may ap contract with	ply to empty c a licensed che	ontainer. State and/or local mical disposal agency.
UN/NA number: Not Hazard class: Not Exceptions: Not a	t applicable Pack	ping name: N king group: No ERG Guide #	ot applicable	Reportable Qua	antity: No	Ma	arine pollutant: No
Section 15	Regulatory information						
	to be listed if the CAS number for	the anhydrous form	· · ·	RCRA code	DSL	NDSL	CA Bron 65
Componer Silicon		Listed	CERLCA (RQ) Not listed	D001	Listed	Not listed	CA Prop 65 This product does not contain
		LISIEU	NULIISLEU	DOUT	LISIEU		any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
dent determinations of su	uitability and completeness of infor cy for Research on Cancer, OSHA	mation from all sour	ces to assure proper use ty and Health Administra	e of these materials and	I the safety and he rget Organ Toxicit	ealth of employees ty, SE: Single Exp	ered by them and must make indepen- s. NTP: National Toxicology Program, osure, RE: Repeated Exposure, ercedes: October 19 202

## 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 SHOT	
Synonyms Zinc / Zinc Metal / Zinc Metal Shot	
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	Supplemental information: 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.

#### 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	
Zinc, shot		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	Handling and storage	Page E2 o
Description of the second state	and after union. Do not use a set of the second in a with the second line of the the set of the the set of the	Le la contala

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		
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.

approved respirator.							
Section 9	Physical and chemica	al properties					
Appearance: Solid. Odor: No odor. Odor threshold: Da pH: Data not availat Melting / Freezing poin Boiling point: 907° Flash point: Not ap Section 10	ole. nt: 419°C (787°F) C (1665°F) plicable	Flammability ( Explosion limi Vapor pressur Vapor density Relative densit Solubility(ies):	tte ( = 1): Not appli solid/gas): Not appl ts: Lower / Upper: e (mm Hg): Data not (Air = 1): Data not a ty (Specific gravity) Insoluble	icable Not applicable t available vailable	Auto-igniti Decompos Viscosity: Molecular		: Not applicable ire: Data not available.
Section 10	Stability and reactivity	y					
Incompatibilities wi	Stable : Excessive temperatures. th other materials: Strong osition products: Zinc ox	Hydrogen may evolv g acids, halogens, acid	ls, alkalies and water	h water or damp air.	nerate hvdroge	n das.	
			,,			· <b>3</b>	
Section 11	Toxicological informa	tion					
Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No componen Ca Prop 65: This pro Reproductive toxici STOT-single expose STOT-repeated exp Aspiration hazard: Potential health effe Inhalation: Inhalation Ingestion: May be ha Skin: May cause der Eyes: Contact with e Signs and symptom Additional informat	ation: Data not available e/irritation: Data not avail sensitization: Data not a city: Data not available a not available of this product present at let to of this product present at duct does not contain any ty: Data not available osure: Data not available Data not available cosure: Data not available data not available cost: of dust or fume may cause armful if swallowed. matitis. eyes may cause mechanica so f exposure: Over-hea ion: RTECS #: None assi	vailable evels greater than or e levels greater than or t levels greater than or chemicals known to the r irritation to eyes, nose il irritation. ting of alloy can produ gned	equal to 0.1% is iden equal to 0.1% is iden e State of California t e, throat, and cause a	tified as probable, po ntified as a carcinoge o cause cancer or re metallic taste in the r	ossible or confir en or potential d productive toxi mouth. May ca	med human card carcinogen by OS city. use metal fume fo	0,
Section 12	Ecological informatio	n					
Toxicity to algae: No Persistence and de Mobility in soil: No	<b>and other aquatic inverte</b> o data available <b>gradability:</b> No data availa	able Bioaccumu PBT and vF	Ilative potential: No PvB assessment: N	o data available	or disposal.		
Section 13	Disposal consideration						
	delines are intended for different. Dispose of in						container. State and/or local emical disposal agency.
Section 14	Transport informatio						
UN/NA number:	Not applicable	hipping name: N	ot Regulated				
Hazard class: No		Packing group: No		Reportable Qua	antity: No	Ма	arine pollutant: No
Exceptions: Not		020 ERG Guide #	Not applicable				
Section 15	Regulatory informatio		is on the Inventory P-t				
A chemical is considered Compone	d to be listed if the CAS numbe	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						
							ered by them and must make indepen-

ndent 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 Red 221 Red

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AIGON 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	SULFUR	
Synonyms	Sulfur Flowers; Sulfur Flour	
Section 2	Hazards identification	
Pictograms	: WARNING : GHS07 ns: None known	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.
GHS Classi Skin irritatior	fication: n (Category 2)	
	nformation: Hazard statement: es skin irritation.	

#### 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		
Sulfur		7704-34-9	100%	231-722-6		
• • •						
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 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: 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. Finely dispersed particles form explosive mixtures in 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.

Containment and Cleanup: 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.

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.

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

Section 9	Physical and chemical pro	perties							
Odor: Odor of rott Odor threshold: I pH: Data not avail Melting / Freezing Boiling point: 444	Data not available. lable. <b>J point:</b> 116-121°C (242-251°F)	Flammability (s Explosion limit Vapor pressure Vapor density Relative density	te ( = 1): Not applic solid/gas): Data not a s: Lower / Upper: 3 e (mm Hg): 0 @ 138 Air = 1): Data not av (Specific gravity): 2.04 Insoluble in water.	available. 3.3% / 46.0% °C (280°F) railable	Auto-igniti Decompos Viscosity: Molecular		e: 248°C (478°F) Ire: Data not available.		
Section 10	Stability and reactivity								
Chemical stability Conditions to avo	y: Stable bid: Excessive temperatures, heat		us polymerization: me and other sources						
Incompatible mat	terials: Reacts violently with strong	g oxidizing agent	s. Corrosive to coppe	er and copper alloys.	Damp sulfur v	will corrode steel	I.		
Hazardous decon	nposition products: Sulfur dioxid	e.							
Section 11	Toxicological information								
Respiratory or sk Germ cell mutage Carcinogenity: E NTP: No compone IARC: No compone OSHA: No compoi Ca Prop 65: This p Reproductive tox STOT-single expo	age/irritation: Data not available kin sensitization: Data not available enicity: Data not available Data not available ent of this product present at levels nent of this product present at levels nent of this product present at levels nent of this product present at levels orduct does not contain any chem kicity: Data not available osure: Data not available	greater than or e greater than or s greater than or	equal to 0.1% is ident equal to 0.1% is iden	ified as probable, po tified as a carcinoge	ssible or confir n or potential o	med human car carcinogen by O			
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burning Skin: Redness, P Eyes: Redness, p Signs and sympt	<b>xposure:</b> Data not available <b>d:</b> Data not available	cause dermatitis		and respiratory trac					
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness, P Eyes: Redness, p Signs and sympt Additional inform Section 12	xposure: Data not available d: Data not available effects: g sensation, cough, sore throat. M g sensation, diarrhea. Prolonged or repeated contact may bain, blurred vision. coms of exposure: See Potential H hation: RTECS #: WS4250000 Ecological information	cause dermatitis nealth effects abo	ve.	and respiratory trac					
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burning Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: B Toxicity to fish: B Toxicity to daphen Toxicity to daphen Toxicity to dapae: Persistence and of Mobility in soil: N Other adverse eff Section 13	xposure: Data not available d: Data not available effects: g sensation, cough, sore throat. M g sensation, diarrhea. Prolonged or repeated contact may vain, blurred vision. orms of exposure: See Potential h nation: RTECS #: WS4250000 Ecological information Brachydanio rerio (fish, fresh water ia and other aquatic invertebrate No data available degradability: No data available No data available fects: An environmental hazard ca Disposal considerations	cause dermatitis nealth effects abo ), LC50 = 866 mg s: Daphnia mag Bioaccumu PBT and vi nnot be excluded	ve. //L/96 hours na (Crustacea), EC50 lative potential: No PVB assessment: No l in the event of unpro	= >10,000 mg/L/24 data available o data available fessional handling o	hours r disposal.	pply to emoty c	container. State and/or loca		
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness, P Eyes: Redness, P Signs and sympt Additional inform Section 12 Toxicity to fish: E Toxicity to fish: E Toxicity to dapher Toxicity to dapher Toxicity to algae: Persistence and Mobility in soil: N Other adverse eff Section 13 These disposal g regulations may	xposure: Data not available d: Data not available effects: g sensation, cough, sore throat. M g sensation, diarrhea. Prolonged or repeated contact may bain, blurred vision. oms of exposure: See Potential h nation: RTECS #: WS4250000 Ecological information Brachydanio rerio (fish, fresh water ia and other aquatic invertebrate No data available degradability: No data available No data available fects: An environmental hazard ca Disposal considerations guidelines are intended for the c	cause dermatitis nealth effects abo ), LC50 = 866 mg s: Daphnia mag Bioaccumu PBT and vi nnot be excluded	ve. //L/96 hours na (Crustacea), EC50 <b>Idtive potential:</b> No <b>PvB assessment:</b> No in the event of unpro og-size quantities o	= >10,000 mg/L/24 data available o data available fessional handling o only. Federal regul	hours r disposal. ations may a				
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: E Toxicity to fish: E Toxicity to dapher Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of regulations may Section 14	xposure: Data not available d: Data not available effects: g sensation, cough, sore throat. M g sensation, diarrhea. Prolonged or repeated contact may bain, blurred vision. oms of exposure: See Potential h nation: RTECS #: WS4250000 Ecological information Brachydanio rerio (fish, fresh water ia and other aquatic invertebrate No data available degradability: No data available No data available fects: An environmental hazard ca Disposal considerations guidelines are intended for the c be different. Dispose of in acco Transport information	cause dermatitis nealth effects abo ), LC50 = 866 mg s: Daphnia mag Bioaccumu PBT and vi nnot be excluded lisposal of catal rdance with all	ve. //L/96 hours na (Crustacea), EC50 <b>Idtive potential:</b> No <b>PvB assessment:</b> No in the event of unpro og-size quantities o	= >10,000 mg/L/24 data available o data available fessional handling o only. Federal regul	hours r disposal. ations may a				
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: E Toxicity to fish: E Toxicity to dapher Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of regulations may Section 14 UN/NA number Hazard class: S	xposure: Data not available         d: Data not available         affects:         g sensation, cough, sore throat. M         g sensation, diarrhea.         Prolonged or repeated contact may bain, blurred vision.         oms of exposure: See Potential h         nation: RTECS #: WS4250000         Ecological information         Brachydanio rerio (fish, fresh water, ita and other aquatic invertebrate No data available         degradability: No data available         fects: An environmental hazard ca         Disposal considerations         guidelines are intended for the cobe different. Dispose of in accommons         ransport information         : NA1350       Shipping r         9       Packing g	cause dermatitis nealth effects abo ), LC50 = 866 mg s: Daphnia mag Bioaccumu PBT and vi nnot be excluded lisposal of catal rdance with all name: Sulfur	ve. /L/96 hours ha (Crustacea), EC50 <b>Idative potential:</b> No <b>VB assessment:</b> No <b>I in the event of unpro</b> og-size quantities of local, state and fed	= >10,000 mg/L/24 data available o data available fessional handling o only. Federal regul	hours r disposal. ations may a contract with	i a licensed che			
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: B Toxicity to daphn Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of regulations may Section 14 UN/NA number Hazard class: S Exceptions: N Section 15	xposure: Data not available         d: Data not available         beffects:         g sensation, cough, sore throat. M         g sensation, diarrhea.         Prolonged or repeated contact may bain, blurred vision.         ooms of exposure: See Potential h         nation: RTECS #: WS4250000         Ecological information         Brachydanio rerio (fish, fresh water, ia and other aquatic invertebrate No data available         degradability: No data available         Yo data available         fects: An environmental hazard ca         Disposal considerations         guidelines are intended for the cost be different. Dispose of in accost the formation         : NA1350       Shipping regional stress of the stress of	cause dermatitis nealth effects abo ), LC50 = 866 mg is: Daphnia magi Bioaccumu PBT and vi nnot be excluded isposal of catal irdance with all name: Sulfur roup: Ill Guide # 133	ve. /L/96 hours ha (Crustacea), EC50 <b>lative potential:</b> No <b>PvB assessment:</b> No <b>l</b> in the event of unpro og-size quantities of local, state and fed <b>Report</b>	= >10,000 mg/L/24 data available o data available fessional handling o nly. Federal regul eral regulations or	hours r disposal. ations may a contract with	i a licensed che	emical disposal agency.		
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: B Toxicity to fish: B Toxicity to dapher Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of regulations may Section 14 UN/NA number Hazard class: S Exceptions: N Section 15 A chemical is conside	xposure: Data not available         d: Data not available         d: Data not available         effects:         g sensation, cough, sore throat. M         g sensation, diarrhea.         Prolonged or repeated contact may bain, blurred vision.         oms of exposure: See Potential h         nation: RTECS #: WS4250000         Ecological information         Brachydanio rerio (fish, fresh water, ia and other aquatic invertebrate No data available         degradability: No data available         fects: An environmental hazard ca         Disposal considerations         guidelines are intended for the cost be different. Dispose of in accost transport information         : NA1350       Shipping r         9       Packing g         lo exceptions       2020 ERG         Regulatory information	cause dermatitis nealth effects abo ), LC50 = 866 mg is: Daphnia magi Bioaccumu PBT and vi nnot be excluded isposal of catal irdance with all name: Sulfur roup: Ill Guide # 133 ne anhydrous form	ve. //L/96 hours ha (Crustacea), EC50 <b>lative potential:</b> No <b>PvB assessment:</b> No <b>l</b> in the event of unpro og-size quantities c local, state and fed <b>Report</b> is on the Inventory list.	= >10,000 mg/L/24 data available o data available fessional handling o only. Federal regul eral regulations or able Quantity: No	hours r disposal. ations may a contract with	à licensed che Ma	emical disposal agency. arine pollutant: No		
Aspiration hazard Potential health of Inhalation: Burnin Ingestion: Burnin Skin: Redness. F Eyes: Redness, p Signs and sympt Additional inform Section 12 Toxicity to fish: B Toxicity to fish: B Toxicity to daphen Toxicity to algae: Persistence and of Mobility in soil: N Other adverse eff Section 13 These disposal of regulations may Section 14 UN/NA number Hazard class: S Exceptions: N Section 15	xposure: Data not available         d: Data not available         d: Data not available         effects:         g sensation, cough, sore throat. M         g sensation, diarrhea.         Prolonged or repeated contact may bain, blurred vision.         oms of exposure: See Potential h         nation: RTECS #: WS4250000         Ecological information         Brachydanio rerio (fish, fresh water, ia and other aquatic invertebrate No data available         degradability: No data available         fects: An environmental hazard ca         Disposal considerations         guidelines are intended for the cost be different. Dispose of in accost transport information         : NA1350       Shipping r         9       Packing g         lo exceptions       2020 ERG         Regulatory information	cause dermatitis nealth effects abo ), LC50 = 866 mg is: Daphnia magi Bioaccumu PBT and vi nnot be excluded isposal of catal irdance with all name: Sulfur roup: Ill Guide # 133	ve. /L/96 hours ha (Crustacea), EC50 <b>lative potential:</b> No <b>PvB assessment:</b> No <b>l</b> in the event of unpro og-size quantities of local, state and fed <b>Report</b>	= >10,000 mg/L/24 data available o data available fessional handling o nly. Federal regul eral regulations or	hours r disposal. ations may a contract with	i a licensed che	emical disposal agency.		

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

## **GENERAL STORAGE CODE GREEN**

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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.

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 protection							
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
	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>®</sup> by Aldon 221 Roo

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product MAGNESIUM METAL, RIBBON	
Synonyms Magnesium	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS02 Target organs: None known	Precautionary statement: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
GHS Classification: Flammable solid (Category 2)	
GHS Label information: Hazard statement: H228: Flammable 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	
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 protection						
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: Da pH: Data not availa	ata not available. ble. point: 651°C (1203.8°F) °C (2030°F)	Tammability (s Explosion 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 temperatu Data not availab formula: Mg weight: 24.31	:510°C (950°F) <b>re:</b> Data not available.
Section 10	Stability and reactivity						
Chemical stability:	Stable	Hazardo	us polymerization: V	Vill not occur.			
Conditions to avoid	d: Excessive temperatures, heat, s	sparks, open fla	me and other sources	of ignition.			
Incompatible mate	rials: Magnesium will react with wa	ater and acids to	o release hydrogen. A	lso hazardous with	chlorine, bron	nine, iodine and c	oxidizing agents.
Hazardous decom	oosition products: Hydrogen.						
Section 11	Toxicological information						
Carcinogenity: Da NTP: No componen IARC: No componen OSHA: No compone Ca Prop 65: This pro- <b>Reproductive toxic</b> <b>STOT-single expos</b> <b>STOT-repeated exp</b> <b>Aspiration hazard:</b> <b>Potential health eff</b> Inhalation: Inhalatic Ingestion: Ingestion Skin: Particles imbe Eyes: Contact with <b>Signs and sympto</b> chills, nausea, vomi	t of this product present at levels g nt of this product present at levels g ent of this product present at levels oduct does not contain any chemic <b>ity:</b> Data not available <b>sure:</b> Data not available <b>Dosure:</b> Data not available Data not available	greater than or e greater than or als known to the hortness of brea bouth and may o ons. Molten ma eal scratches. A gnesium oxide fi	qual to 0.1% is identif equal to 0.1% is identif State of California to th. tause abdominal pain gnesium may cause s Woid direct viewing of ume subsequent to bu	ied as probable, pos ified as a carcinoge 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 s eye injury ma netal fume fev	rmed human card carcinogen by OS icity. ay result, use fire rer. The tempora	SHA. glasses. ry symptoms can include fever,
Section 12	Ecological information						
Toxicity to algae: N Persistence and de Mobility in soil: No	and other aquatic invertebrates lo data available g <b>radability:</b> No data available	Bioaccumu PBT and vP	lative potential: No o vB assessment: No	data available	r disposal.		
	idelines are intended for the dis e different. Dispose of in accord						
Section 14	Transport information						
UN/NA number: Hazard class: 4. Exceptions: Lin			Reporta	ble Quantity: No G Guide # 138	D	Ма	arine pollutant: No
Section 15	Regulatory information	ilan o ry					
	ed to be listed if the CAS number for the	anhydrous form i	s on the Inventory list.				
Compon		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. Form 06/2015

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Section 1

Identification

# INNOVATING SCIENCE

"Cutting edge science for the classroom"

by 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.

ynonyms         Muriatic Acid, Water Solution / Hydrogen Chloride, Water Solution           ection 2         Hazards identification           ignal word:         WARNING           ictograms:         GHS05	
ignal word: WARNING	
arget organs: Respiratory system, skin, eyes, lungs.         WHS Classification:         corrosive to metals (Category 1)         kin irritant (Category 3)         ye irritant (Category 2B)         SHS Label information:         azard statement(s):         1290: May be corrosive to metals.         316: Causes mild skin irritation.         320: Causes eye irritation.	Precautionary statement(s): P234: Keep only in original container. 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. P406: Store in corrosive resistant container with a resistant inner liner.

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.

Containment and Cleanup: 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 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:	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 <b>oint:</b> ~ 0°C (~ 32°F) [water] °C (212°F) [water] nmable.	Explosion lin Vapor pressu Vapor density Relative dens Solubility(ies Partition coeffi	(solid/gas): No data a its: Upper/Lower: No re (mm Hg): 14 [water] (/Air = 1): 0.7 [water] ity (Specific gravity): : Complete. cient: (n-octanol / water): temperature: No data	o data available   1.0 [water] No data available	Viscosity: Molecular	sition temperatu No data availabl formula: Mixture weight: Mixture	e.
Section 10	Stability and reactivity						
	Containers may burst when he	eated. Avoid co					
formaldehyde.	als: Metals, bases, active meta		, oxidizing agents, hydro	oxides, amines, carl	bonates, cyani	des, sulfides, sulf	ītes,
•	osition products: Hydrogen ch	lloride gas.					
Section 11	Toxicological information						
Skin corrosion/irrita 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	Acute toxicity: Data not available Skin corrosion/irritation: Data not available at this dilution. Serious eye damage/irritation: Data not available at this dilution. Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Germ cell mutagenicity: Data not available TP: 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. IARC: Group 3: Not classifiable as to its carcinogenicity to humans. 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 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 Aspiration hazard: Data not available Potential health effects: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards. Inhalation: May be harmful if inhaled. Material may cause irritation to the tissue of the mucous membranes and upper respiratory tract. Ingestion: May cause irritation and/or burns. Eyes: May cause irritation and/or burns. Signs and symptoms of exposure: Data not available at this dilution.						
Section 12	Ecological information						
Toxicity to daphnia Toxicity to algae: No Persistence and dec Mobility in soil: No	radability: No data available	s: No data avai Bioaccum PBT and v	lable ulative potential: No c PvB assessment: No	lata available data available	r disposal.		
Section 13	Disposal considerations						
	delines are intended for the or different. Dispose of in acco <b>Transport information</b>						
UN/NA number: Hazard class: 8 Exceptions: Limi		ng group: II	lydrochloric acid I	Reportable Qua 2020 ERG Guid		lbs (2270 kg)	Marine pollutant: No
Section 15	Regulatory information						
A chemical is considered Compone	to be listed if the CAS number for t	he anhydrous forn TSCA	t is on the Inventory list.	RCRA code	DSL	NDSL	CA Prop 65
Hydrochloric acid		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	d herein is furnished without warrar	ty of any kind Fr	nplovers should use this in	formation only as a su	ipplement 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>®</sup> by Aldon 221 Roc Avon. W

"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(II) CHLORIDE, 0.1 MOLAR SOLUTION	
Synonyms Cupric Chloride, Water Solution	
Section 2 Hazards identification	
Signal word: WARNING         Pictograms: GHS07 / GHS09         Target organs: Respiratory system, Liver, Kidneys.         Image: Construct of the system of the	<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. Remov contact lenses, if present and easy to do. Continue rinsing.</li> <li>P332+P313: If skin irritation occurs: Get medical advice/attention.</li> <li>P337+P313: If eye irritation persists: Get medical advice/attention.</li> <li>P362+P364: Take off contaminated clothing and wash 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	7732-18-5	98.3%	231-791-2		
Cupric chloride, dihydrate	10125-13-0	1.7%	231-210-2 (anhydrous)		
Section 4 First aid measures					

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

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

EYE CONTACT: 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: 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.

Containment and Cleanup: Absorb with an 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. 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	8 Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	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.

O							
Section 9	Physical and chemical pro	perties					
• • • • •	Data not available. int: Approximately 0°C (32°F) (water) iroximately 100°C (212°F) (water)	Flammability Explosion lim Vapor pressu Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not a its: Lower / Upper: D re (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 Ire: Data not available. ble. re
Section 10	Stability and reactivity						
Incompatible mate	<ul> <li>Stable</li> <li>id: Hygroscopic material. Avoid e</li> <li>erials: Potassium, sodium, hydraz</li> <li>position products: Copper oxide</li> </ul>	xposure or conta ine, nitromethan	e, aluminum, strong oxi	ires and incompatibl		obromite.	
		, ,					
Section 11	Toxicological information Copper chloride] Oral-rat LD50: 290						
IARC: No comport OSHA: No comport Ca Prop 65: This p Reproductive tox STOT-repeated ex Aspiration hazarc Potential health e Inhalation: Sympto irritation. Ingestion: May ca Skin: Contact with Eyes: Contact with Signs and symptot concentrations in contact of the symptot	nt of this product present at levels ent of this product present at levels nent of this product present at level product does not contain any chem icity: Data not available soure: Data not available cposure: Data not available d: Data not available	s greater than or is greater than c icals known to th irritation, sore th ymptoms such a ing, redness, blii ad blurred vision npart a metallic s. Chronic expo	equal to 0.1% is identif r equal to 0.1% is identif e State of California to nroat, shortness of brea is nausea, vomiting and stering and possible sca . Prolonged contact m taste in the mouth. Dar	ed as probable, pos fied as a carcinogen cause cancer or rep h, ulceration and pe diarrhea. rring, dermatitis. ay cause corneal inji age to the kidneys i	sible or confii or potential roductive tox rforation of th ury. nay occur in	rmed human card carcinogen by OS icity. he nasal septum a person's with Wi	SHA. and upper respiratory tract Ison's disease. High
Section 12	Ecological information						
Toxicity to daphni Toxicity to algae:		s: Daphnia mag hours [Copper o Bioaccum PBT and v		ata available	ide]		
Mobility in soil: N	ects: An environmental hazard ca Disposal considerations	nnot be exclude	d in the event of unprof		disposal.		
Mobility in soil: N Other adverse effor Section 13 These disposal g	Disposal considerations uidelines are intended for the d	lisposal of cata	log-size quantities or	essional handling or Iy. Federal regula	tions may a		
Mobility in soil: N Other adverse eff Section 13 These disposal g regulations may b	Disposal considerations uidelines are intended for the of be different. Dispose of in acco	lisposal of cata	log-size quantities or	essional handling or Iy. Federal regula	tions may a		
Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may 1 Section 14 UN/NA number: Hazard class: S	Disposal considerations uidelines are intended for the of be different. Dispose of in acco Transport information : UN3082 Shipping r	lisposal of cata ordance with al name: RQ, E roup: III	log-size quantities or local, state and fede nvironmentally haza <b>Reportab</b>	essional handling or ly. Federal regula ral regulations or o dous substance, <b>le Quantity:</b> 10 ll	tions may a contract with liquid, n.o.s os (4.54 kg	, (Cupric chlor Ma	emical disposal agency.
Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may 1 Section 14 UN/NA number: Hazard class: S	Disposal considerations uidelines are intended for the d be different. Dispose of in acco Transport information UN3082 Shipping r Packing g	lisposal of cata ordance with al name: RQ, E roup: III	log-size quantities or local, state and fede nvironmentally haza <b>Reportab</b>	essional handling or ly. Federal regula ral regulations or o dous substance, <b>le Quantity:</b> 10 ll	tions may a contract with liquid, n.o.s os (4.54 kg	, (Cupric chlor Ma	emical disposal agency. ide solution) arine pollutant: Yes
Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may 1 Section 14 UN/NA number: Hazard class: S Exceptions: Li Section 15 A chemical is consider	Disposal considerations uidelines are intended for the ob be different. Dispose of in acco Transport information UN3082 Shipping r Development Develop	lisposal of cata rodance with al name: RQ, E roup: III than 5 Lt. ; Ro ne anhydrous form	log-size quantities or l local, state and fede nvironmentally haza <b>Reportab</b> eportable quantity eq is on the Inventory list.	essional handling or ly. Federal regula ral regulations or o rdous substance, le Quantity: 10 ll ual to or more tha	tions may a contract with liquid, n.o.s os (4.54 kg n 4.54 Kg	, (Cupric chlor , (Cupric chlor Ma 20	emical disposal agency. ide solution) arine pollutant: Yes 20 ERG Guide # 171
Mobility in soil: N Other adverse effor Section 13 These disposal g regulations may b Section 14 UN/NA number: Hazard class: S Exceptions: Li Section 15	Disposal considerations uidelines are intended for the of be different. Dispose of in acco Transport information UN3082 Shipping r Department Backing g mited quantity equal to or less Regulatory information red to be listed if the CAS number for the nent	lisposal of cata rrdance with al name: RQ, E roup: III than 5 Lt. ; Re	log-size quantities or l local, state and fede nvironmentally haza <b>Reportab</b> eportable quantity eq	essional handling or ly. Federal regula ral regulations or o dous substance, <b>le Quantity:</b> 10 ll	tions may a contract with liquid, n.o.s os (4.54 kg	, (Cupric chlor Ma	emical disposal agency. ide solution) arine pollutant: Yes

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