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Section 1

Identification

INNOVATING SCIENCE® by Aldon 221 Rev of Walder

"Cutting edge science for the classroom"

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

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

Product POTASSIUM FERRICYANIDE

Synonyms Red Prussiate of Potash Section 2 Hazards identification Precautionary statement(s): Signal word: WARNING P264: Wash hands thoroughly after handling. Pictograms: GHS07 P273: Avoid release to the environment. Target organs: None known P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water and soap. 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. **GHS Classification:** P337+P313: If eye irritation persists: Get medical attention. Skin irritation (Category 2) P362+P364: Take off contaminated clothing and wash it before reuse. Eye irritation (Category 2A) P501: Dispose of contents/container to a licensed chemical disposal agency in Aquatic toxicity, chronic (Category 3) accordance with local/regional/national regulations. GHS Label information: Hazard statement: Supplementary information: H315: Causes skin irritation. EUH032: Contact with acids liberates very toxic gas. H319: Causes serious eye irritation. H412: Harmful to aquatic life with long lasting effects.

Hazards not otherwise classified:

Physical hazards not otherwise classified (PHNOC) - Not Known

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

Section 3 Composition / inform	nation on ingredients			
Chemical Name	CAS #	%	EINECS	
Potassium ferricyanide	13746-66-2	100%	237-323-3	
Section 4 First aid measures				

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

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

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

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

Section 5 Fire fighting measures

Suitable Extinguishing Media: 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. Dangerous when heated to decomposition or on contact with acids or acid fume, emits highly toxic fumes of hydrocyanic gas which can form 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: Recover for use 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. Protect from light, heat, acids and acid fumes.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	Particulates not otherwise classified	None established.	TWA: 15 mg/m ³ total dust	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.

0 () 0							
Section 9	Physical and chemical						
Appearance: Solid, Odor: No odor.	Bright orange-red crystals.		<pre>ite (= 1): Not appli solid/gas): Not flam</pre>			ion temperature:	
Odor threshold: Da	ta not available.		ts: Lower / Upper:				re: 198.89°C (390°F)
pH: Data not availab			e (mm Hg): Data not			Data not availabl	
Boiling point: Dec	oint: Data not available		(Air = 1): Data not av ty (Specific gravity):			formula: K ₃ Fe(C weight: 329.26	5N)6
Flash point: Data n			33 g/100 ml water @		morooului	101gill: 020.20	
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoid	Stable : Protect from light, heat, ad		us polymerization:	Will not occur.			
Incompatibilities wi	th other materials: Strong	oxidizers, acids and	acid fumes.				
Hazardous decomp	osition products: Oxides of	of nitrogen, cyanide fu	imes.				
Section 11	Toxicological information	on					
Acute toxicity: Ora	l-rat LD50: 4520 mg/kg						
	ation: Data not available	bla					
	e/irritation: Data not availa sensitization: Data not availa						
Germ cell mutagen	icity: Data not available						
Carcinogenity: Dat NTP: No component	a not available of this product present at lev	/els greater than or e	gual to 0.1% is identi	fied as a known or ar	nticipated carc	inogen by NTP.	
IARC: No componen	t of this product present at le	evels greater than or	equal to 0.1% is ident	ified as probable, pos	ssible or confi	rmed human carci	
	nt of this product present at duct does not contain any cl						HA.
	ity: Data not available					ioity.	
v .	ure: Data not available						
Aspiration hazard:	osure: Data not available Data not available						
Potential health effe							
	n may cause irritation of the may cause irritation and nau		at, cougning and chor	ang.			
Skin: Repeated or p	rolonged contact may cause						
Eyes: May cause mi		not decomposed to c	vanide in the body.	Rapidly excreted in th	e urine annar	ently whithout me	tabolic alteration. Slight short
tem irritation of the s	kin, eyes and mucous memb	oranes is possible. E					abolio altoratorit. Oligin ohort
	ion: RTECS #: LJ8225000						
Section 12	Ecological information						
Toxicity to fish: No		reter No data avail					
Toxicity to algae: No	and other aquatic inverteb o data available	rates: No data availa	able				
	gradability: No data availat		lative potential: No				
Mobility in soil: No Other adverse effect	data available ts: An environmental hazar		PvB assessment: Note I in the event of unpro		r disposal.		
Section 13	Disposal consideration			<u> </u>			
			og-size quantities o	only. Federal regula	ations may a	pply to empty co	ontainer. State and/or local
	different. Dispose of in a		local, state and fed	eral regulations or	contract with	a licensed cher	mical disposal agency.
Section 14	Transport information						
UN/NA number:		nipping name: N	0	Depertable Que	mititu No	Ма	rine nellutentu. No
Hazard class: Not Exceptions: Not		acking group: No 20 ERG Guide #		Reportable Qua	inity: NO	Ma	rine pollutant: No
Section 15	Regulatory information		rior applicable				
A chemical is considered	d to be listed if the CAS number	for the anhydrous form	is on the Inventory list.				
Compone	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Potassium ferricyanio	de	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State
							of California to cause cancer or
							reproductive toxicity.

Section 16 Other information

The information contained herein is furnished without 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

Product

Identification

INNOVATING SCIENCE® by Aldon 221 Roo

"Cutting edge science for the classroom"

NICKEL(II) SULFATE, HEXAHYDRATE

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.

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on	ingredients			
Chemical Name		CAS #	%	EINECS	
Nickel sulfate, hexahy	/drate	10101-97-0	100%	232-104-9 [anhydrous]	
Section 4	First aid measures				

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

INHALATION: HARMFUL IF INHALED. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: 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: CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Dry chemical, CO₂, water spray or regular foam.

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

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

Section 6 Accidental release measures

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

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

Containment and Cleanup: 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 Linits.	Nickel, soluble compounds, as Ni	TWA: 0.1 mg/m ³ (A4) inhalable fraction	TWA: 1 mg/m ³	TWA: 0.015 mg/m ³ as Ni		

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

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

approved respirator.						
Section 9 Physical and chemical	properties					
Appearance: Solid. Green, deliquescent crystalline powder Odor: No odor Odor threshold: Data not available pH: Data not available Melting / Freezing point: Data not available Boiling point: Data not available Flash point: Data not available	Flammability Explosion lim Vapor pressu Vapor density Relative dens	ate (=1): Data not a (solid/gas): Data not its: Lower / Upper: I re (mm Hg): Data not (Air = 1): Data not av ity (Specific gravity): : 62.5 g/100 ml water	available Data not available available railable 2.07	Auto-igniti Decompos Viscosity: Molecular	oefficient: Data n fon temperature: sition temperatur Data not availabl formula: NiSO ₄ • weight: 262.86	Data not available e: 840°C e
Section 10 Stability and reactivity						
Chemical stability: Stable Conditions to avoid: Excessive temperatures ar		ous polymerization:	Will not occur.			
Incompatible materials: None known.						
Hazardous decomposition products: Nickel ox	ides and sulfur oxic	les.				
Section 11 Toxicological information	on					
Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Carcinogenity: Data not available NTP: Known to be a human carcinogen (Nickel co IARC classified: Group 1: Carcinogenic to humans OSHA: Data not available. CA Prop 65: A WARNING! :This product can expr reproductive harm. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Potential health effects: Inhalation: Harmful if inhaled. May cause allergy Ingestion: Harmful if swallowed. Ingestion cause Skin: Causes skin irritation. Signs and symptoms of exposure: Suspected or repeated exposure. Exercise appropriate proce Additional information: RTECS #: QR9600000	ilable mpounds). s (Nickel compound ose you to nickel so or asthma sympton s irritation to the mo c skin reaction. of causing genetic edures to minimize	bluble compounds, whi ns or breathing difficult buth, throat, and stoma defects. May cause ca	es if inhaled. ich.			
Section 12 Ecological information						
Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebr Toxicity to algae: No data available Persistence and degradability: No data availabl Mobility in soil: No data available Other adverse effects: Very toxic to aquatic life v	e Bioaccum PBT and v	ulative potential: No PvB assessment: No				
Section 13 Disposal consideration	s					
These disposal guidelines are intended for the regulations may be different. Dispose of in an Section 14Section 14Transport information	e disposal of cata ccordance with a	alog-size quantities of local, state and fed	only. Federal regul eral regulations or	ations may a contract with	pply to empty co a licensed cher	ontainer. State and/or local mical disposal agency.
UN/NA number: UN3077 Shippin	g name: Enviro	onmentally hazardo	us substances, so	lid, n.o.s., (N	ickel sulfate)	
Hazard class: 9 Packing	group: III	Report	able Quantity: Ye	es		rine pollutant: No
Exceptions: Non regulated equal to or less than	45.39 Kg ; Reporta	able quantity equal to c	or more than 45.4 Kg	I	202	COLLEG Guide # 171
Section 15 Regulatory information						
A chemical is considered to be listed if the CAS number f	-					
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Nickel sulfate	Listed	100 lbs (45.4 kg)	Not listed	Listed	Not listed	WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Section 16 Other information

The information contained herein is furnished without 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.

Product	ALUMINUM POTASSIUM SULFATE
Synonyms	Potassium Alum / Alum

Section 2 Hazards identification

Signal word: WARNING Pictograms: GHS07 Target organs: Liver, Kidneys	Precautionary statement: P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or
GHS Classification: Acute toxicity, oral (Category 4) Skin irritation (Category 2) Eye irritation (Category 2B) GHS Label information: Hazard statement: H302: Harmful if swallowed. H315+H320: Causes skin and eye irritation.	doctor if you feel unwell. P302+P352: IF ON SKIN: Wash with plenty of water and soap. 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. P362+P364: Take off contaminated clothing and wash it before reuse. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / infe	ormation on ingredients			
Chemical Name	CAS #	%	EINECS	
Aluminum potassium sulfate	7784-24-9	100%	233-141-3	
Section 4 First aid measures	S			

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

INHALATION: MAY 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: 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: Fire or excessive heat above 760°C (1400°F), may produce hazardous decomposition products of toxic and corrosive gases, Sulfur trioxide and Aluminum oxide. Sulfur trioxide is an oxidizing agent which supports combustion and will react with water to form Sulfuric acid.

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.

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 Linits.	Aluminum, metal and insoluble compounds	TWA: 1 mg/m ³ Respirable fraction	TWA: 5 mg/m ³ Respirable fraction	TWA: 5 mg/m ³ 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 pro	perties					
Odor: No odor. Odor threshold: Da pH: 3.5 (1% solution	n) int: Loses H ₂ O at 93°C (199°F) a not available	Flammability (Explosion limi Vapor pressur Vapor density Relative densi	te (= 1): Data not a solid/gas): Data not ts: Lower / Upper: I e (mm Hg): Data not (Air = 1): Data not av ty (Specific gravity): Moderately soluble i	available. Data not available available vailable 1.97	Auto-ignitie Decompos Viscosity: Molecular f		: Data not available re : Data not available ole.
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoi	Stable d: Excessive temperature and he		us polymerization:	Will not occur.			
Incompatible mate	rials: Aluminum, copper, steel, zi	nc, strong oxidiz	ing agents.				
Hazardous decom	position products: Oxides of sul	fur, aluminum o	kide, oxides of potass	ium.			
Section 11	Toxicological information						
Serious eye damaq Respiratory or skii Germ cell mutager Carcinogenity: Da NTP: No componen IARC: No componen OSHA: No compone OSHA: No compone Ca Prop 65: This pr Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health ef Inhalation: Causes Ingestion: Harmful Skin: Causes skin i Eyes: Causes eye Signs and sympto	tation: Data not available ge/irritation: Data not available n sensitization: Data not available nicity: Data not available it of this product present at levels of this product present at levels ent of this product present at levels oduct does not contain any chemi city: Data not available sure: Data not available posure: Data not available contain any available	greater than or e greater than or s greater than o cals known to th harmful if inhale nounts may caus ed through the s junctivitis.	equal to 0.1% is ident equal to 0.1% is iden e State of California to d. se gastrointestinal irrit	ified as probable, pos ntified as a carcinoge o cause cancer or rep ation.	ssible or confir n or potential c productive toxi	med human card carcinogen by OS city.	SHA.
Toxicity to algae: N Persistence and de Mobility in soil: No	a and other aquatic invertebrate No data available egradability: No data available	Bioaccum PBT and v	ilative potential : No PvB assessment: No	o data available	r disposal.		
Section 13	Disposal considerations						
Section 15		innonal of onto		phy Endoral regul		only to empty c	
These disposal gu	idelines are intended for the d e different. Dispose of in acco Transport information						
These disposal guregulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No	e different. Dispose of in acco Transport information Not applicable Shipp ot applicable Packi ot applicable 2020 I	ing name: Nng group: N	local, state and fed ot Regulated		contract with	a licensed che	
These disposal gu regulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15	e different. Dispose of in acco Transport information Not applicable Shipp ot applicable Packi it applicable 2020 I Regulatory information	rdance with all ing name: N ng group: N ERG Guide #	local, state and fed ot Regulated ot applicable Not applicable	eral regulations or	contract with	a licensed che	emical disposal agency.
These disposal guregulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15 A chemical is considered	e different. Dispose of in acco Transport information Not applicable Shipp ot applicable Packi it applicable 2020 I Regulatory information ed to be listed if the CAS number for th	rdance with all ing name: N ng group: N ERG Guide # e anhydrous form	local, state and fed ot Regulated ot applicable Not applicable is on the Inventory list.	eral regulations or Reportable Qua	contract with	a licensed che Ma	amical disposal agency. arine pollutant: No
These disposal gu regulations may b Section 14 UN/NA number: Hazard class: N Exceptions: No Section 15 A chemical is considere Compon	e different. Dispose of in acco Transport information Not applicable Shipp ot applicable Packi it applicable 2020 I Regulatory information ed to be listed if the CAS number for th	rdance with all ing name: N ng group: N ERG Guide #	local, state and fed ot Regulated ot applicable Not applicable	eral regulations or	contract with	a licensed che	emical disposal agency.

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

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Section 1

Identification

INNOVATING SCIENCE[®] by Aldon 221 ros 24 ros

"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.

COPPER(II) SULFATE, PENTAHYDRATE Product Synonyms Cupric Sulfate, 5-Hydrate Section 2 Hazards identification Signal word: WARNING Precautionary statement: Pictograms: GHS07 / GHS09 P264: Wash hands thoroughly after handling. Target organs: Liver, Kidneys, Lungs, Spleen. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell. P302+P352: IF ON SKIN: Wash with plenty of water and soap. **GHS Classification:** P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove Acute toxicity-oral (Category 4) contact lenses, if present and easy to do. Continue rinsing. Skin irritation (Category 2) P332+P313: If skin irritation occurs: Get medical attention. Eye irritation (Category 2A) P337+P313: If eye irritation persists: Get medical attention. Aquatic acute toxicity (Category 1) P362+P364: Take off contaminated clothing and wash it before reuse. Aquatic chronic toxicity (Category 1) P391: Collect spillage. P501: Dispose of contents/container to a licensed chemical disposal agency in GHS Label information: Hazard statement: accordance with local/regional/national regulations. H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eve irritation. H410: Very toxic to aquatic life with long lasting effects.

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				
Cupric sulfate		7758-99-8	>99%	231-847-6 (anhydrous)				
• • •								
Section 4	First aid measures							

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

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

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

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

Section 5 Fire fighting measures

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

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

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

Section 6 Accidental release measures

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

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

Containment and Cleanup: 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)		
	Copper, dusts and mists, as Cu	TWA: 1 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³		

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

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

approved respirator.							
Section 9	Physical and chemical	properties					
Appearance: Blue, Odor: Odorless Odor threshold: Da pH: 3.7-4.2 (10% so Melting / Freezing p Boiling point: Decc Flash point: Non-fla	ata not available Jution) point: 150°C (302°F) mposes	Flammability (Explosion lim Vapor pressur Vapor density Relative densi	ate (=1): Not applic solid/gas): Not applic its: Lower / Upper: N re (mm Hg): 20 torr @ (Air = 1): Data not av ty (Specific gravity): : 31.6 g/100 ml water	able lot applicable 22.5°C ailable 2.284	Auto-ignitie Decompos Viscosity: Molecular f		Data not available e: 560°C (1040°F) e.
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoid			us polymerization: V nder normal temperatu		void high tempe	ratures, exposure	to air and incompatible materia
Incompatible mater iron.	ials: Reducing agents, acety	lene or nitromethan	e, magnesium, strong	oases, alkalines, ph	osphates, hydra	azine, zirconium.	Can corrode aluminum, steel a
Hazardous decomp	osition products: Oxides of	sulfur and copper f	umes.				
Section 11	Toxicological information	on					
Germ cell mutagen Carcinogenity: Da NTP: No component IARC: No component OSHA: No component Ca Prop 65: This pro Reproductive toxic STOT-single expose STOT-repeated expose Aspiration hazard: Potential health eff Inhalation: May cau Ingestion: Ingestion Skin: Contact with se Eyes: Can cause se Signs and sympton depression and com dizziness, jaundice,	t of this product present at levent of this product does not contain any chity: Data not available ure: Data not available Data not available Data not available ects: se irritation to the mucous me can cause irritation to the digkin causes slight irritation. Exevere irritation and may result of the sector of the	rels greater than or o vels greater than or evels greater than o lemicals known to th embranes and uppe jestive tract and abo ccessive exposure n in irreversible eye o <i>(sician:</i> Probable m son's disease can b	equal to 0.1% is ident r equal to 0.1% is iden e State of California to r respiratory tract. dominal pain. nay cause allergic derr damage. ucosal damage may c	fied as probable, po tified as a carcinoge o cause cancer or re natitis. May cause i pontradict the use of	ossible or confir en or potential c eproductive toxic rritation or burn gastric lavage.	med human carci carcinogen by OS city. ns on wet skin. Measures agains	0,
Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: No	gradability: No data availab data available	rates: No data avail le Bioaccum PBT and v	able ulative potential: No PvB assessment: No	data available o data available			
	cts: An environmental hazard		d in the event of unpro	tessional handling c	or disposal.		
	Disposal consideration idelines are intended for the e different. Dispose of in a	e disposal of cata					ontainer. State and/or local nical disposal agency.
Section 14	Transport information		,				ugonoj.
UN/NA number: Hazard class: 9	UN3077 Shippin	g group: III		ble Quantity: 10	lbs (4.54 kg)	Mai	ine pollutant: Yes 0 ERG Guide # 171
Section 15	Regulatory information						
	d to be listed if the CAS number		-		DC :	NB C'	
Compon	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Cupric sulfate		Listed	10 lbs (4.54 kg)	Not listed	Not listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or

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

reproductive toxicity.