

"*Cutting edge science for the classroom*"

Safety Data Sheets

Forensic Drug and Poison Analysis: Chemistry and Toxicology

IS9016-REF



Aldon Corporation 221 Rochester Street Avon, New York 14414 Tel: (585) 226-6177 Tel: (800) 724-9877 Fax: (585) 226-6919 www.aldon-chem.com

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Section 1

Chemical Product and Company Identification

Innovating Science[®] by Aldon Corporation

"cutting edge science for the classroom"

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

Not for drug, food or household use.

Product ACETAMINOPHEN	
Synonyms 4-Acetamidophenol / Paracetamol	
Section 2 Hazards Identification	
Signal word: WARNING Pictograms: GHS07 Target organs: Liver, Kidneys	 Precautionary statement(s): P261: Avoid breathing dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P305+P351: IF ON SKIN: Wash with plenty of soap and water. P305+P351: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+P313: If skin irritation occurs: Get medical advice/attention. P337+P313: If eye irritation persists: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Acetaminophen		103-90-2	100%	203-157-5			
Section 4	First Aid Measures						

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

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

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

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. 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						
Exposuro Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	Acetaminophen	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.

approved respirator.			-				
Section 9	Physical & Chemical Prop	oerties					
Appearance: Solid. White powder Evaporation rate (Butyl acetate = 1): Data not available Partition coefficient: Odor: No odor. Flammability (solid/gas): Data not available. Partition coefficient: Odor threshold: Data not available. Flammability (solid/gas): Data not available. Partition coefficient: PH: Data not available. Explosion limits: Lower / Upper: Data not available Decomposition tempera Melting / Freezing point: 168-172°C (334-342°F) Vapor density (Air = 1): Data not available Nolecular formula: C Boiling point: Data not available Relative density (Specific gravity): Data not available Molecular weight: 15 Flash point: Data not available Solubility(ies): 14 g/L water (slight) Molecular weight: 15					on temperature: tion temperature Data not available ormula: C ₈ H ₉ NO	Data not available e: Data not available. e.	
Section 10	Stability & Reactivity						
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures and heat. Incompatible materials: Strong oxidizers. Hazardous decomposition products: Carbon oxides, nitrogen oxides.							
Section 11	Toxicological Information						
Acute toxicity: Oral-rat LD50: 2400 mg/kg 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 classified: 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. Reproductive toxicity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects. STOT-repeated exposure: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Causes respiratory tract irritation. Ingestion: Harmful if swallowed. Skin: Contact with skin may cause irritation. Eyes: Contact with eyes may cause irritation. Eyes: Contact with eyes may cause irritation. Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards. Additional information: RTECS #: AE4200000							
Section 12	Ecological Information						
Toxicity to daphnia Toxicity to algae: No Persistence and de Mobility in soil: No Other adverse effec Section 13 These disposal guid	gradability: No data available	es: Daphnia mag Bioaccumu PBT and vi annot be excluded disposal of catal ordance with all	na (Crustacea), EC50 ulative potential: No PvB assessment: No d in the event of unpro og-size quantities o local, state and fede	data available o data available fessional handling or nly. Federal regula	r disposal. ations may ap		
UN/NA number:	•		•				
Hazard class: Not Exceptions: Not	ot applicable Paci applicable 2016	pping name: N king group: N BERG Guide #	ot applicable	Reportable C	Quantity: No	Ma	rine pollutant: No
Section 15	Regulatory Information	the enhudress fo	is an the Investory Pot				
A chemical is considered Compone	to be listed if the CAS number for	the anhydrous form	IS ON THE INVENTORY LIST.	RCRA code	DSL	NDSL	
Acetaminophen	in .	Listed	Not listed	Not listed	Listed	Not listed	
Section 16	Other Information						
dent determinations of s	ed herein is furnished without warra uitability and completeness of inforn ncy for Research on Cancer, OSHA	nation from all source	ces to assure proper use	of these materials and	the safety and he	alth of employees.	ed by them and must make indepen- NTP: National Toxicology Program, sure, RE: Repeated Exposure,

Form 06/2015

Section 1 **Chemical Product and Company Identification** Page E1 of E2 **CHEMTREC 24 Hour Emergency USA** Innovating Science[®] by Aldon Corporation Phone Number (800) 424-9300 221 Rochester Street 1 703-741-5500 (from anywhere in the world). Avon, NY 14414-9409 "cutting edge science for the classroom" (585) 226-6177 For laboratory and industrial use only. Not for drug, food or household use. ALANINE CONTROL Product Synonyms None Section 2 Hazards Identification This substance or mixture has not been classified as hazardous according Supplemental information: to the Globally Harmonized System (GHS) of Classification and Labeling of Do not breathe vapors, spray or mist. Do not get in eyes, on skin, or on clothing Chemicals. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell. Signal word: 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

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Water β-Alanine Methylparaben		7732-18-5 107-95-9 99-76-3	98.9% 1.0% 0.1%	231-791-2 203-536-5 202-785-7			
Section 4	First Aid Measures						

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 extinguishing agent suitable for type of surrounding fire.

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

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

Section 6 Accidental Release Measures

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

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

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.

Section 7 Handling & Storage Page E2 of E2

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse.
Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure Controls / Perso	nal Protection					
Exposure Limits:	Chemical Name	<i>L</i>	ACGIH (TLV)	0	SHA (PEL)	NIOSH	H (REL)
-	Not applicable.	No	one established.	Nor	ne established.	None es	stablished.
should wear safety g	Is: Facilities storing or utilizing the lasses, goggles, or faceshield, lasses. None should be needed in the lass should be neede	b coat or apron, appr	opriate protective	gloves. Use adequa	te ventilation to keep	airborne concentratio	ons low.
Section 9	Physical & Chemical Prop	erties					
Appearance: Liquid Odor: No odor. Odor threshold: Da pH: Data not availat Melting / Freezing point:	. Clear colorless. ta not available. le. Approximately 0°C (32°F) (water) kimately 100°C (212°F) (water)	Evaporation rate (Flammability (solid Explosion limits: L Vapor pressure (m Vapor density (Air	d/gas): Data not a Lower / Upper: E m Hg): 14 (water = 1): 0.7 (water) cific gravity): Appr	gas): Data not available. Auto-ignition temperature: Data not available wer / Upper: Data not available Decomposition temperature: Data not available. Hg): 14 (water) Viscosity: Data not available. 1): 0.7 (water) Molecular formula: Mixture ic gravity): Approximately 1.0 (water) Molecular weight: Mixture			
Section 10	Stability & Reactivity						
	: Excessive temperatures which	n cause evaporation.	olymerization: \	Will not occur.			
•	th other materials: Strong oxid osition products: Carbon oxid						
Section 11	Toxicological Information						
Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No component IARC: No component OSHA: No component Reproductive toxici STOT-single expost STOT-repeated exp Aspiration hazard: Potential health effe Inhalation: May be ha Ingestion: May be ha Skin: Prolonged con Eyes: Contact may of Signs and symptom not available. Exerci Additional informat	ntion: Data not available p/irritation: Data not available sensitization: Data not available icity: Data not available of this product present at levels t of this product present at levels pre: Data not available Data not available pata not	greater than or equal greater than or equa s greater than or equa s greater than or equa sur knowledge the che nimize potential hazar	Il to 0.1% is identi al to 0.1% is ident emical, physical a	fied as probable, poss tified as a carcinogen	sible or confirmed hun or potential carcinoge	nan carcinogen by IA en by OSHA.	
Section 12	Ecological Information						
Toxicity to algae: No Persistence and de Mobility in soil: No	and other aquatic invertebrate o data available gradability: No data available		PBT and vPvB a	e potential: No data : ssessment: No data fessional handling or	a available		
Section 13	Disposal Considerations						
	delines are intended for the c different. Dispose of in acco Transport Information (US	rdance with all loca	al, state and fede				
UN/NA number: Hazard class: No Exceptions: Not	Not applicable Shipp t applicable Pack	bing name: Not R ing group: Not ap ERG Guide # Not	Regulated	Reportable Quar	ntity: No	Marine pollut	tant: No
Section 15	Regulatory Information						
_	to be listed if the CAS number for t		-			A	
All components listed		TSCA C	CERLCA (RQ)	RCRA code	DSL ND	5L	
Section 16	Other Information						
The information contained dent determinations of s	ed herein is furnished without warrar uitability and completeness of inform ncy for Research on Cancer, OSHA:	ation from all sources to	assure proper use	of these materials and th	ne safety and health of e	mployees. NTP: Nation	nal Toxicology Program,

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Section 1

Chemical Product and Company Identification

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Product AMMONIUM MOLYBDATE, 0.1 MOLAR SOLUTION	
Synonyms Ammonium Molybdate, Water Solution / Simulated Lead Solution	
Section 2 Hazards Identification	
Signal word: WARNING Pictograms: GHS07 Target organs: None known	 Precautionary statement: P261: Avoid breathing mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+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. P332+P313: If skin irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER or doctor if you feel unwell. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Water Ammonium molybda	te	7732-18-5 12054-85-2	88.36% 11.64%	231-791-2 236-031-3			
Section 4	First Aid Measures						

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

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

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

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

Section 5 Fire Fighting Measures

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

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

Specific Hazards: 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 mist/vapours/spray. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

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

Section 8	Exposure Controls / Personal Protection							
Exposuro Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
Exposure Limits:	Ammonium molybdate	Not established	Not established	Not established				

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

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

approved respirator.							
Section 9	Physical & Chemical Prop	perties					
Odor: No odor. Flammability (solid/gas): Data not available. Auto-ignition ter Odor threshold: Data not available. Explosion limits: Lower / Upper: Data not available. Decomposition ter pH: Data not available. Vapor pressure (mm Hg): 14 (water) Viscosity: Data Melting / Freezing point: Approximately 0°C (32°F) (water) Vapor density (Air = 1): 0.7 (water) Molecular formute					•	Data not available e: Data not available. e.	
Section 10	Stability & Reactivity						
Incompatible mater	Stable Excessive temperatures which ials: Strong oxidizers, acids. osition products: Carbon oxid	h cause evaporatior		Will not occur.			
Section 11	Toxicological Information						
Acute toxicity: Oral-rat LD50: 333 mg/kg (anhydrous) [Ammonium molybdate] 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 MTP: 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 carcinogen or potential 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-repeated exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available NTP: Causes skini irritation. Eyes: Causes skini irritation. Eyes							
Section 12	Ecological Information						
Toxicity to algae: N Persistence and de Mobility in soil: No Other adverse effec Section 13 These disposal gui	and other aquatic invertebrat o data available gradability: No data available data available tts: An environmental hazard c Disposal Considerations delines are intended for the o different. Dispose of in acc	Bioaccumula PBT and vPvl annot be excluded in disposal of catalog ordance with all loo	tive potential: No B assessment: No h the event of unpro g-size quantities of cal, state and fed	o data available ofessional handling or only. Federal regula	ations may a		
Section 14	Transport Information (U	S DOT / CANADA	TDG)				
UN/NA number: Hazard class: Not Exceptions: Not Section 15	ot applicable Pack	ping name: Not ing group: Not ERG Guide # No	applicable	Reportable Quan	tity: No	Marine pollu	tant: No
	d to be listed if the CAS number for	the anhydrous form is o	on the Inventory list				
Compone		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	
Ammonium molybda		Listed	Not listed	Not listed	Listed	Not listed	
Section 16	Other Information						
The information contain dent determinations of s	ed herein is furnished without warra suitability and completeness of inforn ncy for Research on Cancer, OSHA	nation from all sources	to assure proper use	of these materials and	the safety and h	health of employees.	ed by them and must make indepen- NTP: National Toxicology Program, sure, RE: Repeated Exposure,

ERG: Emergency Response Guidebook.

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Section 1

Chemical Product and Company Identification

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Innovating Science[®] by Aldon Corporation

CHROMATOGRAPHY SOLVENT

"cutting edge science for the classroom"

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

Not for drug, food or household use.

Product Synonyms

Hazards Identification Section 2

None

Signal word: DANGER Precautionary statement(s): Pictograms: GHS02 / GHS07 P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Target organs: Central nervous system, Liver, Kidneys. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P261: Avoid breathing mist/vapours/spray. **GHS Classification:** P264: Wash hands thoroughly after handling. Flammable liquid (Category 2) P271: Use only outdoors or in a well-ventilated area. Skin irritation (Category 2) Eye irritation (Category 2) STOT-SE (Category 3) clothing. Rinse skin with water/shower. GHS Label information: Hazard statement(s): H225: Highly flammable liquid and vapour. breathing H315: Causes skin irritation. H319: Causes serious eve irritation.

H336: May cause drowsiness or dizziness.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated P332+P313: If skin irritation occurs: Get medical attention. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for P312: Call a POISON CENTER or doctor if you feel unwell P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish. P403+P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Isopropyl alcohol Water Acetic acid		67-63-0 7732-18-5 64-19-7	65.9% 17.6% 16.5%	200-661-7 231-791-2 200-580-7			
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. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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

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

Section 5 **Fire Fighting Measures**

Suitable Extinguishing Media: 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. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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. 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. Keep away from ignition sources.

Section 8	Exposure Controls / Personal Protection						
Exposuro Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	Isopropanol	TWA: 200 ppm / STEL: 400 ppm	TWA: 400 ppm / 980 mg/m ³	TWA: 400 ppm / STEL: 500 ppm			

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

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

	approved respirator.							
Section 9	Physical & Chemical Prop	erties						
Appearance: Clear, colorless liquid. Evaporation rate (Butyl acetate = 1): 0.97* Partition coefficient: (n-octanol / water): Data not available. Odor: Alcohol-vinegar odor. Flammability (solid/gas): Data not available. Partition coefficient: (n-octanol / water): Data not available. Odor threshold: Data not available. Explosion limits: Lower / Upper: 2% / 12% [Pure IPA]† Partition coefficient: (n-octanol / water): Data not available. Welting / Freezing point: 16.7°C (62°F)* Vapor pressure (mm Hg): 33 mm @20°C [Pure IPA]† Decomposition temperature: Data not available. Walting / Freezing point: 16.7°C (62°F)* Relative density (Specific gravity): 1.049 @ 20/4°C* Molecular formu Ia: Mixture Boiling point: Approximately 85-100°C (185-212°F)† Relative density (Specific gravity): 1.049 @ 20/4°C* Solubility(ies): Complete in water. * Glacial acetic acid t Isopropyl alcohol							750°F) ASTM-E659-78 [Pure IPA] [↑] Data not available. * Glacial acetic acid	
Section 10	Stability & Reactivity							
•	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Figure 100 (100 (100 (100 (100 (100 (100 (100							
oleum, chlorinated	Incompatible materials: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates, caustics, aluminums, metals, nitroform, oleum, chlorinated compounds. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-botoxide. Hazardous decomposition products: Carbon oxides and other harmful gases or vapors.							
Section 11	Toxicological Information							
Skin corrosion/irri Serious eye dama Respiratory or ski Germ cell mutaget Carcinogenity: Da NTP: No componer IARC: No componer OSHA: No componer OSHA: No componer OSHA: No componer STOT-single exposi- STOT-repeated ex Aspiration hazard Potential health ef Inhalation: Inhalation and irritation of the Ingestion: Aspiratic develop if this occu Skin: Prolonged or Eyes: Contact caus Signs and sympto Additional informatic	Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg [Acetic acid, glacial] Skin corrosion/irritation: Skin-rabbit - Severe irritant. [Acetic acid, glacial] 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 carcinogen or potential carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Yes Potential health effects: Inhalation: Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat. Continued inhalation may result in unconsciousness and death. Ingestion: Aspiration hazard. Liquid can directly enter the lungs (aspirated) when swallowed or vomited. Serious lung damage and possible fatal chemical pneumonia can develop if this occurs. Skin: Prolonged or repeated contact may cause irritation and drying, cracking and defatting of the skin which can lead to dermatitis. Eyes: Contact causes burning sensation, redness, swelling, and/or blurred vision. Signs and symptoms of exposure: See Potential health effects above.							
Section 12	Ecological Information							
Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 251 mg/L/24 hours [Acetic acid, glacial] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 95 mg/L/24 hours [Acetic acid, glacial] Toxicity to algae: Euglena gracilis (Algae), EC100 = 720 mg/L [Acetic acid, glacial] Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 Disposal Considerations These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.								
Section 14	Transport Information (U		•					
UN/NA number: UN2924 Shipping name: Flammable liquids, corrosive, n.o.s., (Isopropyl alcohol, Acetic acid) Hazard class: 3, (8) Packing group: II Reportable Quantity: No Exceptions: Limited quantity equal to or less than 5 L 2016 ERG Guide # 132 Marine pollutant: No Section 15 Regulatory Information Regulatory Information Respectable Regulatory Information Respectable Regulatory Information								
	ed to be listed if the CAS number for t				יפס	NDSI		
Compon Isopropyl alcohol	ent	TSCA Listed	CERLCA (RQ) Not listed	RCRA code Not listed	DSL Listed	NDSL Not listed		
Acetic acid, glacial		Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed		
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

Section 1

Product

Chemical Product and Company Identification

Page E1 of E2

Innovating Science[®] by Aldon Corporation "cutting edge science for the classroom"

ETHYL ALCOHOL, DENATURED, 95%

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

Not for drug, food or household use.

Synonyms Ethanol, Denatured, 95%	
Section 2 Hazards Identification	
 Signal word: DANGER Pictograms: GHS02 / GHS06 / GHS07 / GHS08 Target organs: Eyes, Central nervous system, Liver, Kidneys. Image: Signal Word: Image: Signal Word: S	 Precautionary statement: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233+P235: Keep container tightly closed. Keep cool. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P311: If exposed or concerned: Call a POISON CENTER or doctor. P337+P313: If Ge irritation persists: Get medical attention. P361+P364: Take off immediately all contaminated clothing and wash it before reuse. P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish. P403+P405: Store in a well-ventilated place. Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product contains a chemical known to the State of California to cause reproductive toxicity (Methanol, developmental).

Section 3 Composition / Information on Ingredients					
Chemical Name	CAS #	%	EINECS		
Ethyl alcohol	64-17-5	80.75 - 81.51%	200-578-6		
Isopropyl alcohol	67-63-0	8.55%	200-661-7		
Water	7732-18-5	5.00%	231-791-2		
Methanol	67-56-1	3.80 - 4.08%	200-659-6		
Methyl isobutyl ketone	108-10-1	0.85 - 0.95%	203-550-1		

Section 4 First Aid Measures

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

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

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

SKIN ABSORPTION: TOXIC IN CONTACT WITH 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. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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. 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, 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:	Ethanol	STEL: 1000 ppm / 1880 mg/m ³ (A3)	TWA: 1000 ppm / 1900 mg/m ³	TWA: 1000 ppm / 1900 mg/m ³		

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

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

S	ection 9 Physical & Chemical Pro	perties	
0 0 0 0 8	ppearance: Clear, colorless liquid. bdor: Mild characteristic odor. bdor threshold: Data not available. H: Data not available. lelting / Freezing point: -114°C (-173°F)* oiling point: 74.80°C (165.2-176°F)* lash point: 5°C (41°F)*	Evaporation rate (Butyl acetate = 1): Ca 2^* Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: $4.0\%(V) / 20.0\%(V)^*$ Vapor pressure (mm Hg): Ca 50 @ $20^{\circ}C^*$ Vapor density (Air = 1): Ca 1.5^* Relative density (Specific gravity): $0.7919 \cdot 0.7955^{\circ}C$ @ $60/60^{\circ}F^*$ Solubility(ies): Soluble in water.	Partition coefficient: (n-octanol / water): Low Pow:32* Auto-ignition temperature: 400°C (752°F)* Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture *[Ethanol]
S	ection 10 Stability & Reactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, inorganic acids and halogens.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 7060 mg/kg; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]

Skin corrosion/irritation: Skin-rabbit - Slight irritant.

Serious eye damage/irritation: Eyes-rabbit - Severe irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available Carcinogenity: 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 classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.

Listed

Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.

Skin: Contact with skin causes irritation defatting on prolonged contact.

Eyes: Contact with eyes may cause blindness.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure] Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute] Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 **Disposal Considerations** These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Transport Information (US DOT / CANADA TDG) Section 14 UN/NA number: UN1170 Shipping name: Ethanol Hazard class: 3 Packing group: || Reportable Quantity: 5,000 lbs (2270 kg) Marine pollutant: No 2016 ERG Guide # 127 Exceptions: Limited quantity equal to or less than 1 L Section 15 **Regulatory Information** A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. CERLCA (RQ) RCRA code DSL NDSL TSCA Component Ethanol Listed Not listed D001 Listed Not listed Methanol Listed 5.000 lbs. U154 Listed Not listed

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.

Not listed

Not listed

I isted

Not listed

Form 06/2015

Isopropanol

221 Rochester Street

(585) 226-6177

Avon, NY 14414-9409

Section 1

Chemical Product and Company Identification

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Page E1 of E2

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

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

Product	FERRIC CHLORIDE, 0.1 MOLAR SOLUTION	
Synonyms	Iron(III) Chloride, Water Solution / Simulated Van Urk Reagent	
Section 2	Hazards Identification	
Pictograms Target orga GHS Class Corrosive to Acute toxici Skin irritatio Eye damag GHS Label H290: May H302: Harrn H315: Caus	rd: DANGER s: GHS05 / GHS07 ans: Eyes, Skin, Respiratory system, Liver, Gastrointestinal tract with the system of the system	 Precautionary statement: P234: Keep only in original container. P406: Store in corrosive resistant container with a resistant inner liner. 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 doctor if you feel unwell. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical attention. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor. 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.

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

Section 3	Section 3 Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Water Ferric chloride, hexa	ahydrate	7732-18-5 10025-77-1	97.297% 2.703%	231-791-2 231-729-4 [anhydrous]	
Section 4	First Aid Measures				

INGESTION: HARMFUL IF SWALLOWED. MAY CAUSE LIVER OR KIDNEYS DAMAGE. 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 DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

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

Section 5 Fire Fighting Measures

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

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

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

Section 6 Accidental Release Measures

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

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

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 Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Limits.	Iron salts, soluble, as Fe	TWA: 1 mg/m ³	No listing	TWA: 1 mg/m ³	

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

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

approved respirator.	approved respirator.							
Section 9	Physical & Chemical Prop	erties						
Odor: No odor. Odor threshold: Da pH: 2 (0.1M solution Melting / Freezing point Boiling point: Appro	Odor threshold: Data not available. Explosion limits: Lower / Upper: Data not available Decomposition temperature: Data not available. pH: 2 (0.1M solution) Vapor pressure (mm Hg): 14 (water) Viscosity: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Vapor density (Air = 1): 0.7 (water) Molecular formula: Mixture Boiling point: Approximately 100°C (212°F) (water) Relative density (Specific gravity): Approximately 1.0 (water) Molecular weight: Mixture							
Section 10	Stability & Reactivity							
Chemical stability: Conditions to avoid	Stable I: Excessive temperatures which		merization: Will not occur.					
Incompatible mater	ials: Water, oxidizing agents, m	etals, strong bases, redu	cing agents, alcohols.					
Hazardous decomp	osition products: Hydrogen ga	s on contact with metals						
Section 11	Toxicological Information							
Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No compone Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: May be of and pulmonary eden Ingestion: May cause Skin: May cause se Eyes: May cause se	Acute toxicity: Oral-rat LD50: 1,872 mg/kg [Ferric chloride, hexahydrate] 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 carcinogen or potential carcinogen by OSHA. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be corrosive or irritating to the nose, throat and respiratory tract. Symptoms may include burning sensation, coughing, shortness of breath, lung inflammation and pulmonary edema. Ingestion: May cause severe liver or kidneys damage. May also cause gastrointestinal damage. Skin: May cause severe irritation and/or burns. Eyes: May cause severe irritation and/or burns. Eyes: May cause severe irritation and/or burns.							
Section 12	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.								
Section 14 Transport Information (US DOT / CANADA TDG) UN/NA number: UN2582 Shipping name: Ferric chloride, solution								
Hazard class: 8								
Section 15	Regulatory Information							
	d to be listed if the CAS number for th	e anhydrous form is on the	Inventory list.					
Compone	ent	TSCA CEF	LCA (RQ) RCRA code	DSL	NDSL			
Ferric chloride, anhy	drous	Listed 1,000	lbs (454 kg) Not listed	Listed	Not listed			
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,								

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

Section 1

Chemical Product and Company Identification

Page E1 of E2

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CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

cu	tung edge selence for the classioon	(585) 226-6177	Not for drug, food or household use.
Product	FERRIC NITRATE, 0.2 MOLAR SOLUTION		
Synonyms	Iron(III) Nitrate, Water Solution		
Section 2	Hazards Identification		
Pictograms Target orga GHS Classi Acute toxicit Skin irritatio Eye irritatior GHS Label H303: May I H315: Caus	ans: Blood		Precautionary statement(s): P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of soap and water P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+P313: If skin irritation occurs: Get medical advice/attention. P337+P313: If eye irritation persists: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash before reuse.

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

Section 3	Composition / Information on	Ingredients		
Chemical Name		CAS #	%	EINECS
Water Ferric nitrate, nonah	ydrate	7732-18-5 7782-61-8	91.9% 8.1%	231-791-2 233-899-5 (anhydrous CAS # 10421-48-4)
Section 4	First Aid Measures			

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

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

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

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

Section 5 **Fire Fighting Measures**

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

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

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

Section 6 **Accidental Release Measures**

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

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

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

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

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

approved respirator.									
Section 9 Physical & Chemical Pro	perties								
Odor: Flammability (solid/gas): Data not available. Auto-igni									
Section 10 Stability & Reactivity									
Chemical stability: Stable Conditions to avoid: Excessive temperatures to c Incompatible materials: Aluminum, cyanides, pho phosphite. Hazardous decomposition products: Nitrogen ov	ause evaporation. sphorous, stanno			ials including s	ulfur, organic mat	terials and sodium hypo-			
Section 11 Toxicological Information									
Acute toxicity: Oral-rat LD50: 3,250 mg/kg [Ferric 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: No component of this product present at level IARC: No component of this product present at leve OSHA: No component of this product present at leve OSHA: No component of this product present at leve Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: Contact with skin may cause irritation. Eyes: Contact with sea propure: To the best of not available. Exercise appropriate procedures to in Additional information: RTECS #: NO7175000 [ble s greater than or of ls greater than or els greater than o our knowledge th ninimize potential	equal to 0.1% is identi r equal to 0.1% is iden ne chemical, physical a	fied as probable, po ified as a carcinoge	ssible or confiri	med human carci	HA.			
Section 12 Ecological Information									
Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebra Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available Other adverse effects: An environmental hazard of Section 13 Disposal Considerations These disposal guidelines are intended for the regulations may be different. Dispose of in acc Section 14 Transport Information (U	Bioaccum PBT and v annot be exclude disposal of cata ordance with all	ulative potential: No PvB assessment: No d in the event of unprov log-size quantities or local, state and fede	data available ressional handling o nly. Federal regul	ations may ap					
Hazard class: Not applicable Pack	ping name: N king group: N	ot applicable	Reportable C	luantity: No	Mar	rine pollutant: No			
Exceptions: Not applicable 2016 Section 15 Regulatory Information	ERG Guide #	Not applicable							
A chemical is considered to be listed if the CAS number for	the anhydrous form	is on the Inventory list							
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL				
Ferric nitrate (solid)	Listed	1,000 lbs (454 kg)	D001	Listed	Not listed				
Section 16 Other Information									

dent determination of automation contained network of any kind. Employers should use this information only as a supplement to other information gameted by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Section 1

Chemical Product and Company Identification

Page E1 of E2

Innovating Science[®] by Aldon Corporation 221 Rochester Stree

"cutting edge science for the classroom"

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only. Not for drug, food or household use.

Product FERRIC NITRATE, 0.2 MOLAR SOLUTION Synonyms Iron(III) Nitrate, Water Solution / Simulated Potassium Chromate Section 2 Hazards Identification Signal word: WARNING Precautionary statement(s): Pictograms: GHS07 P264: Wash hands thoroughly after handling. Target organs: Blood P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of soap and water P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+P313: If skin irritation occurs: Get medical advice/attention. **GHS Classification:** P337+P313: If eye irritation persists: Get medical advice/attention. Acute toxicity (Category 5) P362+P364: Take off contaminated clothing and wash before reuse. Skin irritation (Category 2) Eye irritation (Category 2B) GHS Label information: Hazard statement(s): H303: May be harmful if swallowed. H315: Causes skin irritation. H320: Causes eye irritation.

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

Section 3	Composition / Information on	Ingredients		
Chemical Name		CAS #	%	EINECS
Water Ferric nitrate, nonah	ydrate	7732-18-5 7782-61-8	91.9% 8.1%	231-791-2 233-899-5 (anhydrous CAS # 10421-48-4)
Section 4	First Aid Measures			

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

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

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

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

Section 5 Fire Fighting Measures

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

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

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

Section 6 Accidental Release Measures

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

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

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 Pro	tection		
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Limits.	Iron salts, soluble, as Fe	TWA: 1 mg/m ³	None	TWA: 1 mg/m ³

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

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

approved respirator.									
Section 9 Physical & Chemical Pro	perties								
Odor: Flammability (solid/gas): Data not available. Auto-igni									
Section 10 Stability & Reactivity									
Chemical stability: Stable Conditions to avoid: Excessive temperatures to c Incompatible materials: Aluminum, cyanides, pho phosphite. Hazardous decomposition products: Nitrogen ov	ause evaporation. sphorous, stanno			ials including s	ulfur, organic mat	terials and sodium hypo-			
Section 11 Toxicological Information									
Acute toxicity: Oral-rat LD50: 3,250 mg/kg [Ferric 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: No component of this product present at level IARC: No component of this product present at leve OSHA: No component of this product present at leve OSHA: No component of this product present at leve Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: Contact with skin may cause irritation. Eyes: Contact with sea propure: To the best of not available. Exercise appropriate procedures to in Additional information: RTECS #: NO7175000 [ble s greater than or of ls greater than or els greater than o our knowledge th ninimize potential	equal to 0.1% is identi r equal to 0.1% is iden ne chemical, physical a	fied as probable, po ified as a carcinoge	ssible or confiri	med human carci	HA.			
Section 12 Ecological Information									
Toxicity to fish: No data available Toxicity to daphnia and other aquatic invertebra Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available Other adverse effects: An environmental hazard of Section 13 Disposal Considerations These disposal guidelines are intended for the regulations may be different. Dispose of in acc Section 14 Transport Information (U	Bioaccum PBT and v annot be exclude disposal of cata ordance with all	ulative potential: No PvB assessment: No d in the event of unprov log-size quantities or local, state and fede	data available ressional handling o nly. Federal regul	ations may ap					
Hazard class: Not applicable Pack	ping name: N king group: N	ot applicable	Reportable C	luantity: No	Mar	rine pollutant: No			
Exceptions: Not applicable 2016 Section 15 Regulatory Information	ERG Guide #	Not applicable							
A chemical is considered to be listed if the CAS number for	the anhydrous form	is on the Inventory list							
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL				
Ferric nitrate (solid)	Listed	1,000 lbs (454 kg)	D001	Listed	Not listed				
Section 16 Other Information									

dent determination of automation contained network of any kind. Employers should use this information only as a supplement to other information gameted by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

GENERAL STORAGE CODE GREEN

Section 1	Chemical Product and Company Identification	ation	Page E1 of E2
	vating Science [®] by Aldon Corporation Itting edge science for the classroom"	221 Rochester Stree Avon, NY 14414-94 (585) 226-6177	
Product	GLYCINE CONTROL		
Synonyms	None		
Section 2	Hazards Identification		
to the Glob Chemicals. Signal word Pictograms Target orga GHS Class GHS Label	ance or mixture has not been classified as hazardous a ally Harmonized System (GHS) of Classification and La d: None required s: No symbol required ans: None known ification: None required information: Hazard statement: None required ary statement: None required	•	Supplemental information: Do not breathe vapors, spray or mist. 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.

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

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Water Glycine Methylparaben		7732-18-5 56-40-6 99-76-3	98.9% 1.0% 0.1%	231-791-2 200-272-2 202-785-7	
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

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

Fire Fighting Measures

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

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

Section 6 **Accidental Release Measures**

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

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

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.

Section 7 Handling & Storage Page E2 of E2

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse. Storage: Store in a cool, well-ventilated area away from incompatible substances.

Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name		ACGIH (TLV)	C	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Not applicable.		None established.	No	ne 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 protecti approved respirator.	on: None should be needed in r	ormal laboratory h	andling at room tempera	atures. If misty c	onditions prevail, work ir	n fume hood or wear a NIOSH/MSHA-		
Section 9	Physical & Chemical Prope	rties						
	ta not available. Ie. Approximately 0°C (32°F) (water) kimately 100°C (212°F) (water)	ar colorless. Evaporation rate (Water = 1): <1 Partition coefficient: Data not available k available. Flammability (solid/gas): Data not available. Partition coefficient: Data not available k available. Explosion limits: Lower / Upper: Data not available Pactition coefficient: Data not available variately 0°C (32°F) (water) Vapor density (Air = 1): 0.7 (water) 14 (water) vij 100°C (212°F) (water) Relative density (Specific gravity): Approximately 1.0 (water) Molecular weight: Mixture						
Section 10	Stability & Reactivity							
Conditions to avoid Incompatibilities with	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures which cause evaporation. Incompatibilities with other materials: Strong oxidizers. Hazardous decomposition products: Carbon oxides. Incompatibilities with other materials: Strong oxidizers.							
Section 11	Toxicological Information							
Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component OSHA: No component Reproductive toxici STOT-single expose STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: May be h Ingestion: May be h Skin: Prolonged con Eyes: Contact may of Signs and symptom not available. Exerci	ntion: Data not available p/irritation: Data not available sensitization: Data not available city: Data not available of this product present at levels t of this product present at levels t	greater than or equ greater than or eq s greater than or er ur knowledge the e imize potential ha:	ual to 0.1% is identified qual to 0.1% is identified chemical, physical and t	as probable, pos l as a carcinoger	sible or confirmed huma	an carcinogen by IARC.		
Section 12	Ecological Information							
Toxicity to algae: No Persistence and deg Mobility in soil: No Other adverse effect	and other aquatic invertebrate o data available gradability: No data available data available ts: An environmental hazard ca		Bioaccumulative po PBT and vPvB asses	ssment: No data	a available			
Section 13	Disposal Considerations	anonal of actors		Endoral regula	tiono mov contrata	anty container. State and/or lass!		
	different. Dispose of in acco Transport Information (US	dance with all lo	cal, state and federal			npty container. State and/or local d chemical disposal agency.		
UN/NA number: Hazard class: No Exceptions: Not	t applicable Packi	ing name: Not ng group: Not ERG Guide # N	applicable Re	portable Qua	ntity: No	Marine pollutant: No		
Section 15	Regulatory Information							
	to be listed if the CAS number for th							
All components listed		TSCA	CERLCA (RQ)	CRA code	DSL NDS	<u> </u>		
Section 16	Other Information							
The information contained dent determinations of se	ed herein is furnished without warrant uitability and completeness of inform icy for Research on Cancer, OSHA: (ation from all sources	to assure proper use of the	ese materials and t	he safety and health of emp	n gathered by them and must make indepen- oloyees. NTP: National Toxicology Program, le Exposure, RE: Repeated Exposure,		

Section 8

Section 1	Chemical Product and Company Identific	ation	Page E1 of E2
	rating Science [®] by Aldon Corporation tting edge science for the classroom"	221 Rochester Street Avon, NY 14414-940 (585) 226-6177	CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only. Not for drug, food or household use.
Product	HYDROCHLORIC ACID, 0.5 MOLAR (0.5 NORMAL) S	OLUTION	
Synonyms	Muriatic Acid, Water Solution; Hydrogen Chloride, Water	Solution	
Section 2	Hazards Identification		
Pictograms Target orga GHS Class Skin irritant Eye irritant GHS Label Hazard sta H316: Caus	(Category 3) (Category 2B) information:		Precautionary statement(s): P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention.

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

Section 3	Composition / Information on	Ingredients			
Chemical Name		CAS#	%	EINECS	
Water Hydrochloric acid		7732-18-5 7647-01-0	98.44% 1.56%	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: Neutralize spill with sodium bicarbonate or calcium hydroxide, 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 Pro	tection			
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Limits.	Hydrogen chloride	STEL: C 2 ppm / C 2.98 mg/m ³	STEL: C 5 ppm / C 7 mg/m ³	STEL: C 5 ppm / C 7 mg/m ³	

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

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

approved respirator.									
Section 9	Physical & Chemical Prop	erties							
Odor: Pungent odo Odor threshold: Da pH: N/A Melting / Freezing po Boiling point: Appr	or threshold: Data not available. Explosion limits: Upper/Lower: Data					available. Auto-ignition temperature: Data not available. ata not available. Decomposition temperature: Data not available. r] Viscosity: Data not available. Molecular formula: Mixture			
Section 10	Stability & Reactivity								
Chemical stability: Conditions to avoid	Stable I: Containers may burst when h		olymerization: W vith water.	ill not occur.					
Incompatible mater formaldehyde.	ials: Metals, bases, active met	als, alkali metals, oxidiz	ing agents, hydro	xides, amines, carl	bonates, cyani	des, sulfides, sulfi	ites,		
Hazardous decomp	osition products: Hydrogen o	hloride gas.							
Section 11	Toxicological Information								
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 Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP. 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. 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: 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 be harmful if of mallowed. Skin: May cause irritation and/or burns. Eyes: May cause irritation and/or burns. Signs and symptoms of exposure: Data not available at this dilution. Additional information: RTECS #: MW4025000 [Hydrochloric acid]									
Section 12	Ecological Information								
Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: No	gradability: No data available	es: No data available Bioaccumulative PBT and vPvB a	e potential: No d ssessment: No	ata available data available	r disposal.				
Section 13	Disposal Considerations								
These disposal gui regulations may be Section 14	delines are intended for the different. Dispose of in acc Transport Information (U	ordance with all local	state and feder	y. Federal regulations or	ations may ap contract with	oply to empty co a licensed cher	ntainer. State and/or local nical disposal agency.		
UN/NA number:	•	name: Hydrochlori	,						
Hazard class: 8	ited quantity equal to or less	roup: III	Reportab	e Quantity: No Guide # 157		Ма	rine pollutant: No		
Section 15	Regulatory Information								
	d to be listed if the CAS number for	the anhydrous form is on th	ne Inventory list.						
Compone	ent	TSCA C	ERLCA (RQ)	RCRA code	DSL	NDSL			
Hydrochloric acid		Listed	Not listed	D002	Listed	Not listed			
Section 16	Other Information								
		nty of any kind. Employers	s should use this info	ormation only as a su	pplement to othe	er information gather	red 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.

Page E1 of E2

Section 1 Chemical Product and Company Identification

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world).

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

Product NINHYDRIN	
Synonyms 1,2,3-Indantrione Monohydrate	
Section 2 Hazards Identification	
Signal word: WARNING Pictograms: GHS07 Target organs: Eyes, Skin, Respiratory system GHS Classification: Acute tox. (Category 4) Skin irrit. (Category 2) Eye irrit. (Category 2A) STOT-SE (Category 3) GHS Label information: Hazard statement: H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation. H335: May cause respiratory irritation.	 Precautionary statement: P261: Avoid breathing dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. P332+P313: If skin irritation occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash before reuse. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

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

Section 3	Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Ninhydrin		485-47-2	100%	207-618-1		
Section 4	First Aid Measures					

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

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

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

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

Section 5 Fire Fighting Measures

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

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

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

Section 6 Accidental Release Measures

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

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

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 Limiter	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	Г		
Exposure Limits:	Particles not otherwise classified	None established	TWA: 5 mg/m ³ respirable fraction	None established	1		

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 & Chemical Prop	perties						
 Appearance: Solid. Yellow-white crystalline powder. Odor: Characteristic 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 	Vapor pressure (mm Ho Vapor density (Air = 1):): Data not available. r / Upper: Data not available g): Data not available Data not available ravity): Data not available	Auto-igniti Decompos Viscosity: Molecular	•	Data not available e: 240-250°C (464-48 e.	82°F)	
Section 10 Stability & Reactivity							
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures. Protect from light. Turns red at 125°C (257°F). Swells at 139°C (282.2°F). Incompatible materials: Amines, caustic and other alkalies. Hazardous decomposition products: Oxides of carbon.							
Section 11 Toxicological Information							
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 Carcinogenity: Data not available Carcinogenity: 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 not available, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-single exposure: Data not available STOT-single exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: Causes irritation. Eyes: Causes irritation. Eyes: Causes irritation. Signs and symptoms of exposure: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise approprinate procedures to							
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 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 requ	ulations may a	pply to empty co	ontainer. 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 (US DOT / CANADA TDG)							
Hazard class: Not applicable Pac	ping name: Not Regu king group: Not applic ERG Guide # Not app	able Reportable Q	u antity : No	Ma	rine pollutant: No	0	
A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.							
Component		CA (RQ) RCRA code	DSL	NDSL			
Ninhydrin		ot listed Not listed	Listed	Not listed			
(Miniy Mini			LISICU				
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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SAFETY DATA SHEET

Section 1

Due duet

Chemical Product and Company Identification

Page E1 of E2

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

Not for drug, food or household use.

Flounce	POTASSION CARBONATE, ANTI-DROUS	
Synonyms	Potash / Carbonic Acid, Dipotassium Salt / Simulated Cocaine	
Section 2	Hazards Identification	
Pictograms Target orga GHS Class Acute toxici Eye irritatio GHS Label H302: Harm	ans: None known	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 doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3 Comp	Section 3 Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Potassium carbonate		584-08-7	100%	209-529-3			
Section 4 First A	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

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

Fire Fighting Measures

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Concentrated solutions of potassium carbonate present a greater hazard than the granular form. Solution is strongly alkaline and should be handled with care.

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 & Storage Page E2 of E2 Pead 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

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 dusts. Wash thoroughly after handling. Remove and wash clothing before reuse.

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

Sections	Exposure controls / reisonal Protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
	Potassium carbonate	None established.	None established.	None established.			

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

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

Section 9 Physical & Chemical Prop	perties	
 Appearance: Solid, white granular powder. Odor: No odor. Odor threshold: Data not available. pH: 11.6 (3% solution) Melting / Freezing point: 891°C (1635°F) Boiling point: Data not available Flash point: Not flammable 	Evaporation rate (=1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Not flammable Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): 2.428 @ 19°C Solubility(ies): Soluble in water	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: >950°C (1742°F) Viscosity: Data not available. Molecular formula: K ₂ CO ₃ Molecular weight: 138.21
Section 10 Stability & Reactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures. Avoid moisture. Avoid contact with lime. Potassium carbonate and lime will react in the presence of water to form caustic potash.

Incompatibilities with other materials: Acids. strong oxidizers.

Hazardous decomposition products: Carbon oxides, potassium oxides.

Section 11	Toxicological Inform	nation						
Acute toxicity: Oral-rat LD50: 1870 mg/kg Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Gern cell mutagenicity: 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 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-single exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Causes respiratory irritation with sore throat and cough. Ingestion: Harmful if wallowed with burning sensation in the throat and chest. Skin: Causes serious irritation with redness and pain. Signs and symptoms of exposure: Exercise appropriate procedures to minimize potential hazards. Additional information: RTECS #: TS7750000								
Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: No	gradability: No data av	rtebrates: ailable	EC50 - Daphr Bioaccumu PBT and vi	nia magna (Water flea Ilative potential: No PvB assessment: N	data available o data available			
Section 13	Disposal Considera	ations						
These disposal gu regulations may be Section 14	idelines are intended f e different. Dispose of Transport Informat	in accorda	ance with all	local, state and fed	only. Federal regu eral regulations or	lations may ap contract with	oply to empty co a licensed chem	ntainer. State and/or local nical disposal agency.
Hazard class: N	UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No							
Section 15 Regulatory Information								
A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.								
Compone Potassium carbonate	Component TSCA CERLCA (RQ) RCRA code DSL NDSL Potassium carbonate Listed Not listed Not listed Listed Not listed							
Section 16	Other Information							
								ed by them and must make indepen- NTP: National Toxicology Program,

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

Section 1 Chemical Product and Company Identification

Page E1 of E2

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Not for drug, food or household use.

Product	SALICYLIC ACID	
Synonyms	2-Hydroxybenzoic acid / Aspirin	
Section 2	Hazards Identification	
GHS Class Acute toxici Eye irritation STOT SE (0 GHS Label H302: Harrr H319: Caus	ans: Central nervous system, Kidneys, Pancreas ification: ty, oral (Category 4) n (Category 2B)	 Precautionary statement: P261: Avoid breathing dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301+P330: HP312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Salicylic acid		69-72-7	100%	200-712-3		
,						
Section 4	First Aid Measures	·				

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

INHALATION: MAY BE HARMFUL IF INHALED. 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. Dusts may form flammable and 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: 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.

Section 7	Handling & Storage
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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale 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. Light sensitive. Protect from light and moisture.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Salicylic acid	Not listed	Not listed	Not listed		

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 1 Physical & Chemical Properties Appearance::: Source: Partition coefficient: Data not available. Corr Investion: Filamability (solidgas):: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Corr Dirty (Support) Subbility Subbility (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Section 10 Subbility (Subbility (approved respirator.								
Odie: No adate: Auto-ignation:	Section 9	Physical & Chemical Prop	erties						
Chamical stability: Stability: Hazardous polymerization: Will not occur: Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Stacessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Conditions to avoid: Excessive temperatures and heat. Section 11 Toxicological information Acute toxicity: Conditions: Data of avoid: Section 11 Toxicological information Section 11 Toxicological information Section 21 Data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Section 11 Toxicological information Bazardou data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Data of avoid: Section 21 Data of avoid: Datavoid: Data of avoid:	Odor: No odor. Odor threshold: Dai pH: 2.4 Melting / Freezing po Boiling point: 211°C	a not available. bint: 158-160°C (316-320°F) : (412°F)	Flammability (Explosion limi Vapor pressur Vapor density Relative densit	solid/gas): Data not ts: Lower: Ca. 1.1% e (mm Hg): 1 mm @ (Air = 1): 4.8 ty (Specific gravity):	available. @ 20°C Upper: N/ 114°C 1.443 (20°/4°)	Auto-igniti A Decompos Viscosity: Molecular	ion temperature: sition temperatur Data not availabl formula: C ₇ H ₆ O	540°C (1004°F) e: 540°C (1004°F) e.	
Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron saits, spirit nitroue other, lead acetate and iodine. Hazardous decomposition product:: Oxides of action and phenol. Section 11 Toxicological Information Acute toxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Section 11 Toxicological Information: Market oxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Berne Continue on available General Information: General Information:: Skn-rabbit - draze test 500 mg/24H - Mild initiant MRC: No component of this product present at levels grater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC. Stro1-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated carces and and available Potential heads Str01-repate causes initiation with nauses, voming and darrhes. May cause 'tallcylism', characterized by headache, dizzines, ringing in the ears.	Section 10	Stability & Reactivity				1			
Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as avecific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'saloylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental contaison, drowsines, sweating, hirits, typerventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and comase, since and the skin is were or moist. May cause rash and enptions. Eyes: Contact causes surbance matel avecing present is first for with water, LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: No data available Bioaccurulative potential: No data available Other adverse effects: An env	Conditions to avoid Incompatible materi	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron salts, spirit nitrous ether, lead acetate and iodine.							
Skin corrosion/Infritetion: Skin-rabbit-draize test 500 mg/241- Mild infriant Serious eye damage/infrattorin: Faste and available Germ cell mutagenicity: Data not available Carcinogenity: Data not available Strite: Strite: COSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available Strite: Strite: Aspiration haradito: Data not available Aspiration haradito: Inselito: Notatian health officets: Inhalation: Inhalation: Inselito: Inselito: Sin: Contal health officets: Inhalation: Inselito: Nay cause: salicylism', characterizad by headache, dizziness, ringing in the ears, hearing information: Sin: Contal health officets: Inhalation: Interviews on the solicabase balance. Skin:	Section 11	Toxicological Information							
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours 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 or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information TSCA CERLCA (RQ) RCRA code DSL NDSL	Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component OSHA: No component Reproductive toxici STOT-single exposu STOT-repeated expo Aspiration hazard: Potential health effer Inhalation: Inhalation Ingestion: Ingestion hearing difficulty, visu CNS disturbances su Skin: Contact causes Signs and symptom Additional informati	Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/24H - Mild irritant Serious eye damage/irritation: Eyes-rabbit - draize test 100 mg - Severe 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 carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation causes irritation of the mucous membrane and upper respiratory tract. Ingestion: Ingestion causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'salicylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental confusion, drowsiness, sweating, thirst, hyperventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and coma. skin eruptions, and alteration in the acid-base balance. Skin: Contact causes irritation and possible burns, especially if the skin is wet or moist. May cause rash and eruptions. Eyees: Contact causes severe irritation. May result in corneal injury. Signs and sympto							
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information Z016 ERG Guide # Not applicable Renortable Quantity: NDSL A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours Persistence and degradability: 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.								
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information 2016 ERG Guide # Not applicable Renortable Quantity: No Marine pollutant: No A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL		•	isposal of octo		nly Federal regul	ations may a	poly to empty or	ontainer State and/or local	
UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL	regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.								
Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Not applicable Marine pollutant: No								
Salicylic acid Listed Not listed Not listed Not listed Not listed	Compone	nt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
	Salicylic acid		Listed	Not listed	Not listed	Listed	Not listed		

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 Chemical Product and Company Identification

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

Product	SALICYLIC ACID	
Synonyms		
Section 2	Hazards Identification	
GHS Class Acute toxici Eye irritation STOT SE (0 GHS Label H302: Harrn H319: Caus	ans: Central nervous system, Kidneys, Pancreas ification: ity, oral (Category 4) n (Category 2B)	 Precautionary statement: P261: Avoid breathing dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Salicylic acid		69-72-7	100%	200-712-3			
Section 4	First Aid Measures						
0000014	r inst Alu measures						

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

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

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

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

Section 5 Fire Fighting Measures

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

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

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

Section 7	Handling & Storage
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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale 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. Light sensitive. Protect from light and moisture.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Salicylic acid	Not listed	Not listed	Not listed		

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 1 Physical & Chemical Properties Appearance::: Source: Partition coefficient: Data not available. Corr Investion: Filamability (solidgas):: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Corr Dirty (Support) Subbility Subbility (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Section 10 Subbility (Subbility (approved respirator.								
Odie: No adate: Auto-ignation:	Section 9	Physical & Chemical Prop	erties						
Chamical stability: Stability: Hazardous polymerization: Will not occur: Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Stacessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Conditions to avoid: Excessive temperatures and heat. Section 11 Toxicological information Acute toxicity: Conditions: Data of avoid: Section 11 Toxicological information Section 11 Toxicological information Section 21 Data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Section 11 Toxicological information Bazardou data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Data of avoid: Section 21 Data of avoid: Datavoid: Data of avoid:	Odor: No odor. Odor threshold: Dai pH: 2.4 Melting / Freezing po Boiling point: 211°C	a not available. bint: 158-160°C (316-320°F) : (412°F)	Flammability (Explosion limi Vapor pressur Vapor density Relative densit	solid/gas): Data not ts: Lower: Ca. 1.1% e (mm Hg): 1 mm @ (Air = 1): 4.8 ty (Specific gravity):	available. @ 20°C Upper: N/ 114°C 1.443 (20°/4°)	Auto-igniti A Decompos Viscosity: Molecular	ion temperature: sition temperatur Data not availabl formula: C ₇ H ₆ O	540°C (1004°F) e: 540°C (1004°F) e.	
Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron saits, spirit nitroue other, lead acetate and iodine. Hazardous decomposition product:: Oxides of action and phenol. Section 11 Toxicological Information Acute toxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Section 11 Toxicological Information: Market oxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Berne Continue on available General Information: General Information:: Skn-rabbit - draze test 500 mg/24H - Mild initiant MRC: No component of this product present at levels grater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC. Stro1-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated carces and and available Potential heads Str01-repate causes initiation with nauses, voming and darrhes. May cause 'tallcylism', characterized by headache, dizzines, ringing in the ears.	Section 10	Stability & Reactivity				1			
Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as avecific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'saloylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental contaison, drowsines, sweating, hirits, typerventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and comase, since and the skin is were or moist. May cause rash and enptions. Eyes: Contact causes surbance matel avecing present is first for with water, LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: No data available Bioaccurulative potential: No data available Other adverse effects: An env	Conditions to avoid Incompatible materi	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron salts, spirit nitrous ether, lead acetate and iodine.							
Skin corrosion/Infritetion: Skin-rabbit-draize test 500 mg/241- Mild infriant Serious eye damage/infrattorin: Faste and available Germ cell mutagenicity: Data not available Carcinogenity: Data not available Strite: Strite: COSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available Strite: Strite: Aspiration haradito: Data not available Aspiration haradito: Inselito: Notatian health officets: Inhalation: Inhalation: Inselito: Inselito: Sin: Contal health officets: Inhalation: Inselito: Nay cause: salicylism', characterizad by headache, dizziness, ringing in the ears, hearing information: Sin: Contal health officets: Inhalation: Interviews on the solicabase balance. Skin:	Section 11	Toxicological Information							
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours 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 or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information TSCA CERLCA (RQ) RCRA code DSL NDSL	Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component OSHA: No component Reproductive toxici STOT-single exposu STOT-repeated expo Aspiration hazard: Potential health effer Inhalation: Inhalation Ingestion: Ingestion hearing difficulty, visu CNS disturbances su Skin: Contact causes Signs and symptom Additional informati	Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/24H - Mild irritant Serious eye damage/irritation: Eyes-rabbit - draize test 100 mg - Severe 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 carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation causes irritation of the mucous membrane and upper respiratory tract. Ingestion: Ingestion causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'salicylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental confusion, drowsiness, sweating, thirst, hyperventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and coma. skin eruptions, and alteration in the acid-base balance. Skin: Contact causes irritation and possible burns, especially if the skin is wet or moist. May cause rash and eruptions. Eyees: Contact causes severe irritation. May result in corneal injury. Signs and sympto							
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information Z016 ERG Guide # Not applicable Renortable Quantity: NDSL A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours Persistence and degradability: 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.								
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information 2016 ERG Guide # Not applicable Renortable Quantity: No Marine pollutant: No A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL		•	isposal of octo		nly Federal regul	ations may a	poly to empty or	ontainer State and/or local	
UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL	regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.								
Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Not applicable Marine pollutant: No								
Salicylic acid Listed Not listed Not listed Not listed Not listed	Compone	nt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
	Salicylic acid		Listed	Not listed	Not listed	Listed	Not listed		

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

Page E1 of E2

Section 1 Chemical Product and Company Identification

Innovating Science[®] by Aldon Corporation

"cutting edge science for the classroom"

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world).

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

Dreduct	SALICYLIC ACID	
Product		
Synonyms	2-Hydroxybenzoic acid / Unknown #2	
Section 2	Hazards Identification	
Pictogram Target org GHS Class Acute toxic Eye irritatio STOT SE (GHS Labe H302: Hari H319: Cau	rd: WARNING is: GHS07 gans: Central nervous system, Kidneys, Pancreas	 Precautionary statement: P261: Avoid breathing dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Salicylic acid		69-72-7	100%	200-712-3		
						_
Section 4	First Aid Measures					

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

INHALATION: MAY BE HARMFUL IF INHALED. 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. Dusts may form flammable and 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: 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.

Section 7	Handling & Storage
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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale 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. Light sensitive. Protect from light and moisture.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Salicylic acid	Not listed	Not listed	Not listed		

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 1 Physical & Chemical Properties Appearance::: Source: Partition coefficient: Data not available. Corr Investion: Filamability (solidgas):: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Dirty Corr Dirty (Support) Partition coefficient: Data not available. Corr Dirty (Support) Subbility Subbility (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Conditions to available. Macro Dirty (Support) Section 10 Subbility (Subbility (approved respirator.								
Odie: No adate: Auto-ignation:	Section 9	Physical & Chemical Prop	erties						
Chamical stability: Stability: Hazardous polymerization: Will not occur: Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Stacessive temperatures and heat. Light and moisture sensitive: Incompatible metrifies: Conditions to avoid: Excessive temperatures and heat. Section 11 Toxicological information Acute toxicity: Conditions: Data of avoid: Section 11 Toxicological information Section 11 Toxicological information Section 21 Data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Section 11 Toxicological information Bazardou data of avoid: Data of avoid: Section 21 Data of avoid: Data of avoid: Data of avoid: Data of avoid: Section 21 Data of avoid: Datavoid: Data of avoid:	Odor: No odor. Odor threshold: Dai pH: 2.4 Melting / Freezing po Boiling point: 211°C	a not available. bint: 158-160°C (316-320°F) : (412°F)	Flammability (Explosion limi Vapor pressur Vapor density Relative densit	solid/gas): Data not ts: Lower: Ca. 1.1% e (mm Hg): 1 mm @ (Air = 1): 4.8 ty (Specific gravity):	available. @ 20°C Upper: N/ 114°C 1.443 (20°/4°)	Auto-igniti A Decompos Viscosity: Molecular	ion temperature: sition temperatur Data not availabl formula: C ₇ H ₆ O	540°C (1004°F) •e: 540°C (1004°F) e.	
Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron saits, spirit nitroue other, lead acetate and iodine. Hazardous decomposition product:: Oxides of action and phenol. Section 11 Toxicological Information Acute toxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Section 11 Toxicological Information: Market oxicity: Oral-rat LDS0: 891 mg/kg: inhalation-rat LCS0: 0.9 mg/L/1 hour. Skrine and amage/initiation:: Skn-rabbit - draze test 500 mg/24H - Mild initiant Berne Continue on available General Information: General Information:: Skn-rabbit - draze test 500 mg/24H - Mild initiant MRC: No component of this product present at levels grater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC. Stro1-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. Str01-repated carces and and available Potential heads Str01-repate causes initiation with nauses, voming and darrhes. May cause 'tallcylism', characterized by headache, dizzines, ringing in the ears.	Section 10	Stability & Reactivity				1			
Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Eyes-rabbit - draize test 500 mg/L/4 - Mid Irritant Serious eye damage/irritation: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Garricinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single exposure: The substance or mixture is classified as avecific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-single causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'saloylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental contaison, drowsines, sweating, hirits, typerventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and comase, since and the skin is were or moist. May cause rash and enptions. Eyes: Contact causes surbance matel avecing present is first for with water, LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: Leuciscus disu (fish, firsh water), LC50 = 90 mg/L/4 hours Toxicity to fish: No data available Bioaccurulative potential: No data available Other adverse effects: An env	Conditions to avoid Incompatible materi	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures and heat. Light and moisture sensitive. Incompatible materials: Strong oxidizers, iron salts, spirit nitrous ether, lead acetate and iodine.							
Skin corrosion/Infritetion: Skin-rabbit-draize test 500 mg/241- Mild infriant Serious eye damage/infrattorin: Faste and available Germ cell mutagenicity: Data not available Carcinogenity: Data not available Strite: Strite: COSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available Strite: Strite: Aspiration haradito: Data not available Aspiration haradito: Inselito: Notatian health officets: Inhalation: Inhalation: Inselito: Inselito: Sin: Contal health officets: Inhalation: Inselito: Nay cause: salicylism', characterizad by headache, dizziness, ringing in the ears, hearing information: Sin: Contal health officets: Inhalation: Interviews on the solicabase balance. Skin:	Section 11	Toxicological Information							
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours 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 or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information TSCA CERLCA (RQ) RCRA code DSL NDSL	Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component OSHA: No component Reproductive toxici STOT-single exposu STOT-repeated expo Aspiration hazard: Potential health effer Inhalation: Inhalation Ingestion: Ingestion hearing difficulty, visu CNS disturbances su Skin: Contact causes Signs and symptom Additional informati	Acute toxicity: Oral-rat LD50: 891 mg/kg ; Inhalation-rat LC50: 0.9 mg/L/1 hour Skin corrosion/irritation: Skin-rabbit - draize test 500 mg/24H - Mild irritant Serious eye damage/irritation: Eyes-rabbit - draize test 100 mg - Severe 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 carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation causes irritation of the mucous membrane and upper respiratory tract. Ingestion: Ingestion causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause 'salicylism', characterized by headache, dizziness, ringing in the ears, hearing difficulty, visual disturbance, mental confusion, drowsiness, sweating, thirst, hyperventilation, nausea, vomiting and diarrhea. Severe salicylate intoxication may cause CNS disturbances such as convulsions and coma. skin eruptions, and alteration in the acid-base balance. Skin: Contact causes irritation and possible burns, especially if the skin is wet or moist. May cause rash and eruptions. Eyees: Contact causes severe irritation. May result in corneal injury. Signs and sympto							
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information Z016 ERG Guide # Not applicable Renortable Quantity: NDSL A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 230 mg/L/24 hours Toxicity to algae: Haematococcus pluvialis (Algae), EC10 = 165 mg/L/4 hours Persistence and degradability: 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.								
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 (US DOT / CANADA TDG) UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Section 15 Regulatory Information 2016 ERG Guide # Not applicable Renortable Quantity: No Marine pollutant: No A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL		•	isposal of octo		nly Federal regul	ations may a	poly to empty or	ontainer State and/or local	
UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No Section 15 Regulatory Information A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. TSCA CERLCA (RQ) RCRA code DSL NDSL	regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.								
Component TSCA CERLCA (RQ) RCRA code DSL NDSL	Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable Not applicable Marine pollutant: No								
Salicylic acid Listed Not listed Not listed Not listed Not listed	Compone	nt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
	Salicylic acid		Listed	Not listed	Not listed	Listed	Not listed		

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

Chemical Product and Company Identification

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"cutting edge science for the classroom"

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only. Not for drug, food or household use.

Product SIMULATED MARIJUANA Synonyms None Section 2 Hazards Identification Signal word: WARNING Precautionary statement: Pictograms: No symbol required P264: Wash hands thoroughly after handling. Target organs: None known P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **GHS Classification:** P337+P313: If eye irritation persists: Get medical advice/attention. Eye irrit. (Category 2B) GHS Label information: Hazard statement: H320: Causes eye irritation.

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

Section 3 Composition / Inf	ormation on Ingredients			
Chemical Name	CAS #	%	EINECS	
Oregano flakes, dried Sodium carbonate	None assigned 497-19-8	76% 24%	None assigned 207-838-8	
Section 4 First Aid Measure	S			

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 extinguishing agent suitable for type of surrounding fire.

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Sodium carbonate reacts with hydrated lime to form caustic soda. Special care should be taken where lime and sodium carbonate are handled in the same area.

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.

ction 7	Handling & Sto	orage

Se

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 Linits.	Sodium carbonate	None established.	None established.	None established.		

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

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

Section 9 Physical & Chemical Prop	perties	
 Appearance: Solid. Greenish-brown dried leaves. Odor: Camphorous, spicy odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: Data not available Boiling point: Data not available 	Evaporation rate (=1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Not flammable Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): <1	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture
Flash point: Data not available	Solubility(ies): Partially soluble in water	
Section 10 Stability & Reactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures. Avoid moisture.

Incompatibilities with other materials: Acids cause decompostion liberating gaseous carbon dioxide.

Hazardous decomposition products: Carbon dioxide.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 4090 mg/kg ; Inhalation-rat LC50: 2.3 mg/l/2 hours ; Dermal-rat LD50: 2210 mg/kg [Sodium carbonate]

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Signs and symptoms of exposure: Burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Additional information: RTECS #: VZ4050000 [Sodium carbonate]

Section 12 Ecological Information

Toxicity to fish: LC50 - Lepomis macrochirus (Bluegill) - 300 mg/l - 96 h [Sodium carbonate]

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 265 mg/l - 48 h [Sodium carbonate]

Toxicity to algae: No data available

Mobility in soil: No data available

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

PBT and vPvB assessment: No data available

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

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Hazard class: N Exceptions: N	Not applicable	Packing	group: N	lot Regulated ot applicable Not applicable	Reportable Qu	antity: No	Ма	rine pollutant: No	
Section 15	Regulatory Inform	ation							
A chemical is consider	ed to be listed if the CAS nu	mber for the ar	hydrous form	is on the Inventory list.					
Compor	nent		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
Sodium carbonate			Listed	Not listed	Not listed	Not listed	Not listed		
Section 16	Other Information								
dent determinations of	f suitability and completenes	s of informatior	n from all sour	ces to assure proper use	of these materials and	the safety and he	ealth of employees.	red by them and must make i NTP: National Toxicology Poster RE: Repeated Exposure	, Program,

Section 1

Chemical Product and Company Identification

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Innovating Science[®] by Aldon Corporation

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

"cเ	utting edge science for the classroom"	Avon, NY 14414-9409 (585) 226-6177	For laboratory and industrial use only. Not for drug, food or household use.
Product	SIMULATED EFFERVESCENT ANTACID		
Synonyms	None		
Section 2	Hazards Identification		
Pictogram Target org GHS Class Eye irritatio GHS Label	ans: None known	P264: W P280: W P305+P Remove	ionary statement(s): /ash hands thoroughly after handling. /ear protective gloves/protective clothing/eye protection/face protection. 351+P338: IF IN EYES: Rinse cautiously with water for several minutes. e contact lenses, if present and easy to do. Continue rinsing. 313: If eye irritation persists: Get medical advice/attention.

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

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Sodium bicarbonate Citric acid, anydrous		144-55-8 77-92-9	70% 30%	205-633-8 201-069-1	
Section 4	First Aid Measures				

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

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

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

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

Section 5

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

Fire Fighting Measures

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

Specific Hazards: 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 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. Minimize dust generation. Store away from acids.

Section 8	Exposure Controls / Personal Protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Limits.	Citric acid	Not listed	Not listed	Not listed	

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 & Chemical Prop	erties								
Appearance: Solid. White, 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: Non-flammable	Evaporation rate (=1): Not applicablePartition coefficient:Flammability (solid/gas): Not applicableAuto-ignition temperExplosion limits: Lower / Upper: Not applicableDecomposition temperVapor pressure (mm Hg): Data not availableViscosity: Not applicaVapor density (Air = 1): Data not availableMolecular formula: NSolubility(ies): Data not availableMolecular weight: Mit			on temperature: ition temperatur Not applicable formula: Mixture	Data not available e: Data not available				
Section 10 Stability & Reactivity									
Chemical stability: Stable Conditions to avoid: Excessive temperature and h Incompatible materials: Strong bases and oxidizin Hazardous decomposition products: Carbon oxid	eat. Avoid dust fo g materials. Read	o .	rature causes decon	•		water and carbon dioxide			
Section 11 Toxicological Information									
Skin corrosion/irritation: Data not available Serious eye damage/irritation: Citric acid: Rabbi Respiratory or skin sensitization: Data not availa Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels IARC: No component of this product present at level OSHA: No component of this product present at level STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation may cause irritation to mucous Ingestion: Ingestion may cause acute gastrointestin Skin: Contact may cause irritation.	Serious eye damage/irritation: Citric acid: Rabbit-highly irritating Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Inhalation may cause irritation to mucous membranes causing sore throat, coughing and shortness of breath. Ingestion: Ingestion may cause acute gastrointestinal irritation with abdominal pain. Skin: Contact with eyes may cause irritation with redness, pain, possible eye burns, conjunctivitis, ulceration and permanent cloudiness.								
Section 12 Ecological Information									
Toxicity to fish: Citric acid: Lepomis macrochirus (Fish, Fresh water) LC50: 1,516 mg/l/96 hours Toxicity to daphnia and other aquatic invertebrates: Citric acid: Daphnia magna (Crustacea) EC50: ca. 120 mg/l/72 hours Toxicity to algae: Citric acid: Scenedesmus quadricauda (Algae) EC3: 640 mg/l/7 days Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 Disposal Considerations These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG)									
Hazard class: Not applicablePackExceptions: Not applicable2012	ping name: N king group: No ERG Guide #	ot applicable	Reportable	Quantity: N	lo M a	rine pollutant: No			
Section 15 Regulatory Information									
A chemical is considered to be listed if the CAS number for Component	the anhydrous form i TSCA	s on the Inventory list. CERLCA (RQ)	RCRA code	DSL	NDSL				
Sodium bicarbonate Citric acid, anhydrous	Listed	Not listed Not listed	Not listed Not listed	Listed Listed	Not listed Not listed				

Section 16 Other Information

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

Section 1

Chemical Product and Company Identification

C 24 Hour Emergency USA

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221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

cu	tung edge science for the classioon	(585) 226-6177	Not for drug, food or household use.
Product	SIMULATED EFFERVESCENT ANTACID		
Synonyms	Unknown #1		
Section 2	Hazards Identification		
Pictograms	ins: None known		Precautionary statement(s): P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
Eye irritation	(Category 2)		
	information: Hazard statement(s): es serious eye irritation.		

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

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Sodium bicarbonate Citric acid, anydrous		144-55-8 77-92-9	70% 30%	205-633-8 201-069-1	
Section 4	First Aid Measures				

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

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

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

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

Section 5

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

Fire Fighting Measures

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

Specific Hazards: 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 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. Minimize dust generation. Store away from acids.

Section 8	Exposure Controls / Personal Protection				
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)	
Exposure Limits.	Citric acid	Not listed	Not listed	Not listed	

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 reepilateri							
Section 9 Physical & Chemical Pr	operties			_			
Appearance: Solid. White, crystalline powder Evaporation rate (= 1): Odor: No odor. Flammability (solid/gas): Odor threshold: Data not available Explosion limits: Lower / pH: Data not available Vapor pressure (mm Hg): Melting / Freezing point: Data not available Relative density (Specific Flash point: Non-flammable Solubility(ies): Data not available			cable Not applicable available ⁄ailable	Auto-ignitie Decompos Viscosity: Molecular f	•	Data not available e: Data not available	
Section 10 Stability & Reactivity							
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperature and heat. Avoid dust formation. High temperature causes decomposition to sodium carbonate, water and carbon dioxide Incompatible materials: Strong bases and oxidizing materials. Reacts with acids to yield acid salts, water and carbon dioxide Hazardous decomposition products: Carbon oxides.							
Section 11 Toxicological Information	on						
Acute toxicity: Citric acid: Oral-rat LD50: 12,000 mg/kg Sodium bicarbonate: Oral-rat LD50: 4220-4400 mg/kg Skin corrosion/irritation: Data not available Serious eye damage/irritation: Citric acid: Rabbit-highly irritating Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available STOT-repeated exposure: Data not available Potential health effects: Inhalation: Inhalation may cause irritation to mucous membranes causing sore throat, coughing and shortness of breath. Ingestion: Ingestion may cause irritation with addominal pain. Skin: Contact may cause irritation with redness, pain, possible eye burns, conjunctivitis, ulceration and permanent cloudiness. Signs and symptoms of exposure: Long term over-exposure may cause damage to tooth enamel.							
Section 12 Ecological Information							
Toxicity to fish: Citric acid: Lepomis macrochirus (Fish, Fresh water) LC50: 1,516 mg/l/96 hours Toxicity to daphnia and other aquatic invertebrates: Citric acid: Daphnia magna (Crustacea) EC50: ca. 120 mg/l/72 hours Toxicity to algae: Citric acid: Scenedesmus quadricauda (Algae) EC3: 640 mg/l/7 days Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 Disposal Considerations These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Section 14 Transport Information (US DOT / CANADA TDG)							
UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: Marine pollutant: No Exceptions: Not applicable 2012 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No							
Section 15 Regulatory Information							
A chemical is considered to be listed if the CAS number for Component	or the anhydrous form is TSCA	s on the Inventory list.	RCRA code	DSL	NDSL		
Sodium bicarbonate Citric acid, anhydrous	Listed Listed	Not listed Not listed	Not listed Not listed	Listed Listed	Not listed Not listed		

Section 16 Other Information

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

	-	-	
Section 1	Chemical Product and Company Identificati	on	Page E1 of E2
	A	21 Rochester Street won, NY 14414-940 585) 226-6177	
Product	SODIUM BICARBONATE, ANHYDROUS		
Synonyms	Baking Soda / Sodium Hydrogen Carbonate / Carbonic Aci	d Sodium (1:1) / 3	Sodium Bicarbonate Antacid
Section 2	Hazards Identification		
to the Globa Chemicals. Signal word Pictograms Target orga GHS Classi	nce or mixture has not been classified as hazardous acc illy Harmonized System (GHS) of Classification and Labe : Not classified ns: None known fication: Not classified nformation: Hazard statement(s): Not classified		Precautionary statement(s): 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.

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

Section 3	Composition / Information on Ingredients				
Chemical Name		CAS #	%	EINECS	
Sodium bicarbonate		144-55-8	100%	205-633-8	
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

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

Fire Fighting Measures

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material is commonly used to extinguish fires.

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. Store away from acids.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Sodium bicarbonate	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 & Chemical Prop	perties	
 Appearance: Solid, white crystalline powder. Odor: No odor. Odor threshold: Data not available. pH: 8.2 (1% solution) Melting / Freezing point: Data not available Boiling point: Decomposes Flash point: Non combustible 	Evaporation rate (=1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Negligible Vapor density (Air = 1): Data not available Relative density (Specific gravity): 2.16 @ 20°C Solubility(ies): 8.6 g/100 ml water at 20°C	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available Viscosity: Data not available. Molecular formula: NaHCO ₃ Molecular weight: 84.01
Continue 40 Ctability 9 Depativity		

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: High temperature causes decomposition to sodium carbonate, water and carbon dioxide.

Incompatible materials: Reacts with acids to yield acid salts, water and carbon dioxide.

Hazardous decomposition products: Gaseous carbon dioxide.

Section 11 **Toxicological Information**

Acute toxicity: Oral-rat LD50: 4220-4400 mg/kg Skin corrosion/irritation: Skin-rabbit - not irritating Serious eye damage/irritation: Eye-rabbit - not irritating Respiratory or skin sensitization: Non sensitizing Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: Excessive dust may irritate respiratory tract. Ingestion: Ingestion may cause gastrointestinal disturbance if ingested. Skin: No hazard known. Eyes: Contact with eyes may cause very slight irritation. Signs and symptoms of exposure: See Potential health effects above. Additional information: RTECS #: VZ0950000 Section 12 **Ecological Information** Toxicity to fish: Gambusia affinis (fish, freshwater) LC50: 7550 mg/l/24 hours Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea) EC50: 2350 mg/l/48 hours Toxicity to algae: Nitcheria linearis (Algae) LC50: 650 mg/l/5 day Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 **Disposal Considerations** These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency. Transport Information (US DOT / CANADA TDG) Section 14 UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No 2016 ERG Guide # Not applicable Exceptions: Not applicable Section 15 **Regulatory Information** A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list. RCRA code DSL NDSL Component TSCA CERLCA (RQ) Sodium bicarbonate Listed Not listed Not listed Listed Not listed 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 indepen-

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

SDS No.: SS0580 SAFETY DATA SHEET CORROSIVE STORAGE CODE WHITE Section 1 **Chemical Product and Company Identification** Page E1 of E2 CHEMTREC 24 Hour Emergency USA Innovating Science[®] by Aldon Corporation Phone Number (800) 424-9300 221 Rochester Street 1 703-741-5500 (from anywhere in the world). Avon, NY 14414-9409 "cutting edge science for the classroom" For laboratory and industrial use only. (585) 226-6177 Not for drug, food or household use. Product SODIUM HYDROXIDE, 1 MOLAR (1 NORMAL) SOLUTION Synonyms Sodium Hydroxide, Water Solution, Sodiul Si Hydateddle Solution Section 2 Hazards Identification Signal word: DANGER Precautionary statement: Pictograms: GHS05 P260: Do not breathe mist/vapours/spray Target organs: Respiratory tract, gastrointestinal tract, eyes, skin. P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363: Wash contaminated clothing before reuse. GHS Classification: P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for Skin. Corr. (Category 1B) breathing. Serious Eye Damage/ Eye Irritation (Category 1) P310: Immediately call a POISON CENTER or doctor. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. GHS Label information: Hazard statement: Remove contact lenses, if present and easy to do. Continue rinsing. H314: Causes severe skin burns and eye damage. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Water Sodium hydroxide		7732-18-5 1310-73-2	96% 4%	231-791-2 215-185-5		
Section 4	First Aid Measures					

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

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

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

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

Section 5 **Fire Fighting Measures**

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

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

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

Section 6 Accidental Release Measures

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

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

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

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

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

approved respirator.								
Section 9	Physical & Chemical Prop	erties						
Appearance: Clear, Odor: No odor. Odor threshold: No pH: Data not availab Melting / Freezing p Boiling point: ~ 100 Flash point: Not flag	t applicable. le. oint: ~ 0°C (~ 32°F) [water])°C (212°F) [water]	Evaporation rate (Water = 1): < 1 Partition coefficient: (n-octanol / water): Not Flammability (solid/gas): Not applicable. Auto-ignition temperature: Not applicable Explosion limits: Lower / Upper: Not applicable Decomposition temperature: Data not available. Vapor pressure (mm Hg): 14 [water] Viscosity: Data not available. Vapor density (Air = 1): 0.7 [water] Molecular formula: Mixture Solubility(ies): Complete in water. Molecular weight: Mixture			Not applicable e: Data not available. e.			
Section 10	Stability & Reactivity							
Conditions to avoid Incompatible mater	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Can react with carbon dioxide to form sodium carbonate. Incompatible materials: Metals, acids, organic compounds, organic nitro compounds. Hazardous decomposition products: Sodium oxide. Reacts with metals to form flammable and explosive hydrogen gas.							
Section 11	Toxicological Information							
Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No compone Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health effi Inhalation: May be h Skin: May be harmfi Eyes: Causes eye b Signs and symptom edema, burning sens and upper respirator	ation: Skin - rabbit - Causes se e/irritation: Eyes - rabbit - Sev sensitization: Data not availa icity: Data not available a not available of this product present at levels t of this product present at level nt of this product present at level t of this produc	ere eye irritation - 24 ble s greater than or equa s greater than or equa els greater than or equa els greater than or equa ses skin burns.	h [Sodium hydroxide Il to 0.1% is identified al to 0.1% is identifie ual to 0.1% is identifie the tissue of the muc f the larynx, spasm, i	as a known or an d as probable, por ed as a carcinoger cous membranes a nflammation and e	ssible or confir n or potential o and upper resp edema of the b	rmed human carci carcinogen by OS piratory tract. pronchi, pneumoni	HA.	
Toxicity to fish: LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h [Sodium hydroxide] Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 - Daphnia - 40.38 mg/l - 48 h [Sodium hydroxide] Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.								
Section 13	Disposal Considerations							
	delines are intended for the							
section 14	different. Dispose of in acc			in regulations or	contract with	a licensed chen	nical disposal agency.	
UN/NA number: UN1824 Shipping name: Sodium hydroxide solution Hazard class: 8 Packing group: II Reportable Quantity: 1,000 lbs (454 kg) Marine pollutant: No Exceptions: Limited quantity equal to or less than 1 L 2016 ERG Guide # 154								
Section 15	Regulatory Information							
A chemical is considered 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		
Sodium hydroxide		Listed 1,0	000 lbs (454 kg)	D002	Listed	Not listed		
Section 16	Other Information							
							red by them and must make indepen- NTP: National Toxicology Program.	

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

Section 1	Chemical Product and Company Identific	ation	Page E1 of E2
	vating Science [®] by Aldon Corporation Itting edge science for the classroom"	221 Rochester Street Avon, NY 14414-940 (585) 226-6177	
Product	SODIUM HYDROXIDE, 1 MOLAR (1 NORMAL) SOLUT	ΓΙΟΝ	
Synonyms	Sodium Hydroxide, Water Solution, Sodiund hydroxideo	adation	
Section 2	Hazards Identification		
Pictogram Target orga GHS Class Skin. Corr. Serious Eye GHS Label	ans: Respiratory tract, gastrointestinal tract, eyes, skin.		 Precautionary statement: P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363: Wash contaminated clothing before reuse. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER or doctor. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

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

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS #	%	EINECS			
Water Sodium hydroxide		7732-18-5 1310-73-2	96% 4%	231-791-2 215-185-5			
Section 4	First Aid Measures						

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

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

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

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

Section 5 Fire Fighting Measures

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

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

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

Section 6 Accidental Release Measures

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

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

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 Limiter	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	Sodium hydroxide	STEL: C 2 mg/m ³	TWA: 2 mg/m ³	STEL: C 2 mg/m ³			

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

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

approved respirator.	approved respirator.							
Section 9	Physical & Chemical Prop	erties						
Appearance: Clear, Odor: No odor. Odor threshold: No pH: Data not availab Melting / Freezing p Boiling point: ~ 100 Flash point: Not flag	t applicable. le. oint: ~ 0°C (~ 32°F) [water])°C (212°F) [water]	Flammability (solid/gas): Not applicable. Auto-ign Explosion limits: Lower / Upper: Not applicable Decompositive Vapor pressure (mm Hg): 14 [water] Viscosity Vapor density (Air = 1): 0.7 [water] Molecular				on temperature:	e: Data not available. e.	
Section 10	Stability & Reactivity							
Conditions to avoid Incompatible mater	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Can react with carbon dioxide to form sodium carbonate. Incompatible materials: Metals, acids, organic compounds, organic nitro compounds. Hazardous decomposition products: Sodium oxide. Reacts with metals to form flammable and explosive hydrogen gas.							
Section 11	Toxicological Information							
Skin corrosion/irrit: Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No componen OSHA: No compone Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health effi Inhalation: May be h Skin: May be harmfi Eyes: Causes eye b Signs and sympton edema, burning sens and upper respirator	Acute toxicity: Data not available Skin corrosion/irritation: Skin - rabbit - Causes severe burns 24 h [Sodium hydroxide] Serious eye damage/irritation: Eyes - rabbit - Severe eye irritation - 24 h [Sodium hydroxide] 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 carcinogen or potential carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-single exposure: Data not available STOT-single exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed. Skin: May be harmful if absorbed through skin. Causes skin burns. Eyes: Causes eye burns. Causes severe eye burns. Signs and symptoms of exposure: Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Additional information: RTECS #: WB4900000 [Sodium hydroxide]							
Section 12 Ecological Information Toxicity to fish: LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h [Sodium hydroxide] Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 - Daphnia - 40.38 mg/l - 48 h [Sodium hydroxide] Toxicity to algae: No data available Persistence and degradability: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.								
Section 13	Disposal Considerations							
	delines are intended for the							
section 14	different. Dispose of in acc Transport Information (U			in regulations or	contract with	a licensed chen	nical disposal agency.	
	•		•					
UN/NA number: Hazard class: 8 Exceptions: Lim	ited quantity equal to or les		Reportable	e Quantity: 1,0 Guide # 154	00 lbs (454 l	kg) Mai	rine pollutant: No	
Section 15	Regulatory Information							
A chemical is considered	d to be listed if the CAS number for	he anhydrous form is on	the Inventory list.					
Compone	ent	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
Sodium hydroxide		Listed 1,0	000 lbs (454 kg)	D002	Listed	Not listed		
Section 16	Other Information							
							red by them and must make indepen- NTP: National Toxicology Program.	

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

Section 1 **Chemical Product and Company Identification** Page E1 of E2

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CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world).

For laboratory and industrial use only

Not for drug, food or household use. Product **THYMOLPHTHALEIN, 0.04% SOLUTION** Thymolphthalein Solution, 0.04% / Thymolphthalein, 0.04% in Ethyl Alcohol / Thymolphthalein, 0.04% in Alcohol / Thymolphthalein, Indicator Solution, 0.04% (Alcoholic) Simulated Scott Reagent Synonyms Section 2 Hazards Identification Signal word: DANGER Precautionary statement: Pictograms: GHS02 / GHS06 / GHS07 / GHS08 P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking Target organs: Eyes, Central nervous system, Liver, Kidneys. P233+P235: Keep container tightly closed. Keep cool. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe mist/vapours/spray. **GHS Classification:** P264: Wash hands thoroughly after handling. Flammable liquid (Category 2) P270: Do not eat, drink or smoke when using this product. Acute toxicity, oral (Category 3) P271: Use only outdoors or in a well-ventilated area. Acute toxicity, dermal (Category 3) P280: Wear protective gloves/protective clothing/eye protection/face protection. Acute toxicity, inhalation (Category 3) P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Eye irritation (Category 2B) P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. STOT-SE (Category 2) Remove contact lenses, if present and easy to do. Continue rinsing. STOT-SE (Category 3) P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. GHS Label information: Hazard statement: P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for H225: Highly flammable liquid and vapour. breathing. H301: Toxic if swallowed P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor. H311: Toxic in contact with skin. P337+P313: If eye irritation persists: Get medical attention. H319: Causes serious eye irritation. P361+P364: Take off immediately all contaminated clothing and wash it before reuse. H331: Toxic if inhaled. P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water H336: May cause drowsiness or dizziness. spray to extinguish. H371: May cause damage to organs. P403+P405: Store in a well-ventilated place. Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product contains a chemical known to the State of California to cause reproductive toxicity (Methanol, developmental)

Section 3	ion 3 Composition / Information on Ingredients					
Chemical Name		CAS #	%	EINECS		
Ethyl alcohol		64-17-5	85.0 - 85.8%	200-578-6		
Isopropyl alcohol		67-63-0	9.0%	200-661-7		
Methanol		67-56-1	4.0 - 4.3%	200-659-6		
Methyl isobutyl keto	one	108-10-1	0.9 - 1.0%	203-550-1		
Thymolphthalein		125-20-2	0.04%	204-729-7		

Section 4 **First Aid Measures**

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

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

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

SKIN ABSORPTION: TOXIC IN CONTACT WITH 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. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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. 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, 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:	Ethanol	STEL: 1000 ppm / 1880 mg/m ³ (A3)	TWA: 1000 ppm / 1900 mg/m ³	TWA: 1000 ppm / 1900 mg/m ³		

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

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

Section 9 Physical & Chemical Pro	Section 9 Physical & Chemical Properties							
Appearance:Clear, colorless liquid.Odor:Mild characteristic odor.Odor threshold:Data not available.pH:Data not available.Melting / Freezing point:-114°C (-173°F)Boiling point:74-80°C (165.2-176°F)Flash point:13°C (55°F) CC	Evaporation rate (Butyl acetate = 1): Ca 2 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 3.3% / 19.0% Vapor pressure (mm Hg): Ca 50 @ 20°C Vapor density (Air = 1): Ca 1.5 Relative density (Specific gravity): 0.7919-0.7955°C @ 60/60°F Solubility(ies): Soluble in water.	Partition coefficient: (n-octanol / water): Low Pow:32 Auto-ignition temperature: 363°C (685°F) Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture *[Ethanol]						
Section 10 Stability & Reactivity								
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Incompatible materials: Strong oxidizers, inorganic acids and halogens. Hazardous decomposition products: Oxides of carbon.								
Section 11 Toxicological Information	L Contraction of the second							
Acute toxicity: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol] Skin corrosion/irritation: Skin-rabbit - Slight irritant. Serious eye damage/irritation: Eyes-rabbit - Severe irritant. 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 classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. **Reproductive toxicity:** Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

ERG: Emergency Response Guidebook

Form 06/2015

Potential health effects:

Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.

Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.

Skin: Contact with skin causes irritation defatting on prolonged contact.

Eyes: Contact with eyes may cause blindness.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure] Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute] Persistence and degradability: No data available Bioaccumulative potential: No data available PBT and vPvB assessment: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.						
Section 13 Disposal Considerations						
These disposal guidelines are intended for the dis regulations may be different. Dispose of in accord						
Section 14 Transport Information (US I	DOT / CANAD	A TDG)				
UN/NA number: UN1170 Shipping name: Ethanol solution Hazard class: 3 Packing group: II Reportable Quantity: 5,000 lbs (2270 kg) Marine pollutant: No Exceptions: Limited quantity equal to or less than 1 L 2016 ERG Guide # 127 Marine pollutant: No						
Section 15 Regulatory Information						
A chemical is considered to be listed if the CAS number for the		,				
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	
Ethanol Methanol Isopropanol	Listed Listed Listed	Not listed 5,000 lbs. Not listed	D001 U154 Not listed	Listed Listed Listed	Not listed Not listed Not listed	
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 indepen- 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,						

FLAMMABLE STORAGE CODE RED

Section 1

Product

Chemical Product and Company Identification

Page E1 of E2

Innovating Science[®] by Aldon Corporation

UNIVERSAL PH INDICATOR

"cutting edge science for the classroom"

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only.

Not for drug, food or household use.

Synonyms Universal Indicator	
Section 2 Hazards Identification	
Signal word: DANGER Pictograms: GHS02 / GHS07 / GHS08 / GHS06 Target organs: Eyes, Central nervous system, Liver, Kidneys. Image: Signal word: Si	 Precautionary statement: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER or doctor if you feel unwell. P332+P313: If eye irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product contains a chemical known to the State of California to cause reproductive toxicity (Methanol, developmental).

Section 3 Composition / Information on Ingredients						
Chemical Name	CAS #	%	EINECS			
Ethyl alcohol	64-17-5	64.50 - 65.11%	200-578-6			
Water	7732-18-5	23.96%	231-791-2			
Isopropyl alcohol	67-63-0	6.83%	200-661-7			
Methanol	67-56-1	3.03 - 3.26%	200-659-6			
Methyl isobutyl ketone	108-10-1	0.68 - 0.76%	203-550-1			
Bromothymol blue	76-59-5	0.06%	200-971-2			
Phenolphthalein	77-19-8	0.06%	201-004-7			
Methyl red	845-10-3	0.02%	212-682-9			
Thymol blue	62625-21-2	0.005%	263-650-6			
Section 4 First Aid Measure	S					

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. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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. 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, 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:	Ethanol	STEL: 1000 ppm / 1880 mg/m ³ (A3)	TWA: 1000 ppm / 1900 mg/m ³	TWA: 1000 ppm / 1900 mg/m ³			

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

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

Section 9 Physical & Chemical Prop	perties	
Appearance: Clear, green liquid. Odor: Mild characteristic odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: -114°C (-173°F)* Boiling point: 75-80°C (173-174°F)* Flash point: Approximately 21°C (70°F)	Evaporation rate (Butyl acetate = 1): 4.1* Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 4.0%(V) / 20.0%(V)* Vapor pressure (mm Hg): 44.6 @ 20°C (68°F)* Vapor density (Air = 1): 1.59* Relative density (Specific gravity): 0.794 @ 60°F* Solubility(ies): Soluble in water.	Partition coefficient: Data not available Auto-ignition temperature: 400°C (752°F)* Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture *[Pure Ethanol]
Section 10 Stability & Poactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, inorganic acids and halogens.

Hazardous decomposition products: Oxides of carbon.

Section 11 **Toxicological Information**

Acute toxicity: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]

Skin corrosion/irritation: Skin-rabbit - Slight irritant.

Serious eye damage/irritation: Eyes-rabbit - Severe irritant.

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 classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.

Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.

Skin: Contact with skin causes irritation defatting on prolonged contact.

Eves: Contact with eves may cause blindness.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 **Ecological Information**

Toxicity to fish: Oncorhynchus mykiss (fish, fre Toxicity to daphnia and other aquatic inverte Toxicity to algae: Chlorella pyrenoidosa (Algae Persistence and degradability: No data availa Mobility in soil: No data available Other adverse effects: An environmental haza	brates: Daphnia magr), EC50 = 9,310 mg/l/g able Bioaccumu PBT and vP	na (Crustacia), EC50 prowth rate [Ethanol, a lative potential: No PvB assessment: No	= 10,800 mg/l/24 ho absolute] data available o data available	•	9.8% pure]		
Section 13 Disposal Consideration	ons						
These disposal guidelines are intended for t regulations may be different. Dispose of in							
Section 14 Transport Information	n (US DOT / CANAD	A TDG)					
	ing name: Ethano ng group: II less than 1 L	Reportal	ble Quantity: 5,0 G Guide # 127	000 lbs (2270	kg) Mar	ine pollutant: No	
Section 15 Regulatory Informatio	n						
A chemical is considered to be listed if the CAS numbe	r for the anhydrous form i	s on the Inventory list.					
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL		
Ethanol Methanol Isopropanol	Listed Listed Listed	Not listed 5,000 lbs. Not listed	D001 U154 Not listed	Listed Listed Listed	Not listed Not listed Not listed		
O settle in AO Othe in Information							

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

Section 1

Chemical Product and Company Identification

Page E1 of E2

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

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only. Not for drug, food or household use.

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

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

Section 3 Composition / Information on Ingredients								
Chemical Name	CAS #	%	EINECS					
Water Glycine Methylparaben Alizarin Yellow R (C.I. No. 14095)	7732-18-5 56-40-6 99-76-3 1718-34-9	>98.8% 1.0% 0.1% 0.0033%	231-791-2 200-272-2 202-785-7 217-002-4					

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 extinguishing agent suitable for type of surrounding fire.

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

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

Section 6 **Accidental Release Measures**

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

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

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.

Section 7	Handling & Storage	Page E2 of E2
Dood lobal an contair	ar before using . Do not wear contact langes when working with chemical	Noon container tightly closed. For laboratory use only. Not for drug food or

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse.
 Storage: Store in a cool, well-ventilated area away from incompatible substances.

Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name		ACGIH (TLV)	C	SHA (PEL)	NIOSH (REL)			
Exposure Emilia.	Not applicable.		None established.	No	ne 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 protect approved respirator.	ion: None should be needed in I	normal laboratory	handling at room tem	peratures. If misty c	onditions prevail, work in	n fume hood or wear a NIOSH/MSHA-			
Section 9	Physical & Chemical Prop	erties							
Boiling point: Approx Flash point: Data n	ta not available. Ie. Approximately 0°C (32°F) (water) kimately 100°C (212°F) (water) ot available	Evaporation rate (Water = 1): <1 Partition coefficient Flammability (solid/gas): Data not available. Auto-ignition tempe			rature: Data not available perature: Data not available. available. Mixture				
Section 10	Stability & Reactivity								
Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures which cause evaporation. Will not occur. Incompatibilities with other materials: Strong oxidizers. Hazardous decomposition products: Carbon oxides.									
Section 11	Toxicological Information								
Acute toxicity: Data not available Skin corrosion/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: 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 carcinogen or potential carcinogen by NTP. IARC: 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: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Ingestion: May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: Prolonged contact may cause irritation. Eyes: Contact may cause irritation. E									
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 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 These disposal qui	Disposal Considerations	isposal of catal	og-size quantities or	ly Federal regula	tions may apply to en	npty container. State and/or local			
regulations may be	different. Dispose of in acco	rdance with all	local, state and fede						
Section 14	Transport Information (US								
UN/NA number: Hazard class: No Exceptions: Not	t applicable Packi	bing name: N ng group: No ERG Guide #	•	Reportable Qua	ntity: No	Marine pollutant: No			
Section 15	Regulatory Information								
A chemical is considered	I to be listed if the CAS number for the nt	e anhydrous form	is on the Inventory list. CERLCA (RQ)	RCRA code	DSL NDS	1			
All components listed		1004		Kolocode					
Section 16	Other Information								
The information contained dent determinations of s	ed herein is furnished without warran uitability and completeness of inform ncy for Research on Cancer, OSHA:	ation from all source	es to assure proper use o	of these materials and t	he safety and health of emp	n gathered by them and must make indepen- oloyees. NTP: National Toxicology Program, le Exposure, RE: Repeated Exposure,			

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Section 8