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Section 1

Identification

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

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

Product POTASSIUM HYDROGEN PHTHALATE	
Synonyms Potassium Biphthalate ; Potassium Acid Phthalate	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: No symbol required Target organs: None known	<b>Precautionary statement:</b> P312: Call a POISON CENTER or doctor if you feel unwell.
GHS Classification: Acute toxicity, oral (Category 5)	
GHS Label information: Hazard statement: H303: May be harmful if swallowed.	

#### Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients							
Chemical Name	CAS #	%	EINECS				
Potassium hydrogen phthalate	877-24-7	100%	212-889-4				
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 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 CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

#### Section 5 Fire fighting measures

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

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

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

# Section 6 Accidental release measures

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

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

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

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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.

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

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

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

approved respirato	)r.							
Section 9	Physical and chem	nical properties						
Odor: No odor. Odor threshold: D pH: 4.0 (0.05M aq	ueous solution)   <b>point:</b> 295-300°C (563-5 ta not available	572°F) Flammab Explosion Vapor pre Relative of	on rate (=1): Data not lity (solid/gas): Data not limits: Lower / Upper: ssure (mm Hg): Data not asity (Air = 1): Data not a lensity (Specific gravity); (ies): Soluble in water.	available. Data not available t available vailable	Auto-igniti Decompos Viscosity: Molecular		: Data not available <b>re:</b> Data not available. ıle.	
Section 10	Stability and reacti	ivity						
Chemical stability Conditions to avo	<ul> <li>y: Stable</li> <li>bid: Excessive temperature</li> </ul>		ardous polymerization:	Will not occur.				
Incompatible mat	erials: Strong oxidizers.							
Hazardous decom	nposition products: Car	bon oxides, potassi	ım oxides.					
Section 11	Toxicological infor	rmation						
Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compor Ca Prop 65: This p	enicity: Data not available part of this product present ent of this product present nent of this product present nent of this product present product does not contain a	t at levels greater that t at levels greater th ent at levels greater t	an or equal to 0.1% is iden han or equal to 0.1% is ide	tified as probable, po entified as a carcinog	ssible or confin len or potential	med human card carcinogen by 0	cinogen by IARC.	
STOT-single expo STOT-repeated ex Aspiration hazard Potential health e Inhalation: Inhalati Ingestion: Ingestic Skin: Contact with Eyes: Contact with Signs and sympto not available. Exe	tion may cause respiratory on may cause nausea, vo n skin may cause irritation h eyes may cause irritatio <b>oms of exposure:</b> To the ercise appropriate procedu	e able y irritation. miting, and diarrhea ı. n. e best of our knowle ures to minimize pot	dge the chemical, physica	l and toxicological pr	operties have i	not been thoroug	hly investigated. Specific da	
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Section 1

Identification

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

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

Product SODIUM HYDROXIDE, ANHYDROUS	
Synonyms Caustic Soda	
Section 2 Hazards identification	
Signal word: DANGER Pictograms: GHS05 Target organs: Respiratory tract, gastrointestinal tract, eyes, skin.	<ul> <li>Precautionary statement:</li> <li>P260: Do not breathe dust.</li> <li>P264: Wash hands thoroughly after handling.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</li> <li>P304+P340: IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.</li> <li>P310: Immediately call a POISON CENTER or doctor.</li> <li>P363: Wash contaminated clothing before reuse.</li> <li>P405: Store locked up.</li> <li>P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.</li> </ul>

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
Sodium hydroxide		1310-73-2	96-100%	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: Flood with water, taking care not to splash or scatter. Avoid carbon dioxide as it reacts exothermically with this material.

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: Contact with metals can generate hydrogen gas. Contact with water produces intense heat and highly irritating and corrosive mist. Hot or molten material will react violently with water liberating heat and causing splashing. Contact with water may generate sufficient heat to ignite combustible materials.

#### Section 6 Accidental release measures

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

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

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

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

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

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

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

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

Section 9	Physical and chemical	properties					
Odor: No odor. Odor threshold: D pH: 13.0 - 14.0	<b>point:</b> 318°C (604°F) 0°C (2534°F)	Flammability ( Explosion limi Vapor pressur Vapor density Relative densi	ate (=1): Not applicat solid/gas): Data not av ts: Lower / Upper: Not e (mm Hg): 1 mm Hg ( (Air = 1): Not applicabl ty (Specific gravity): 2 : 29.6 @ 0°C (32°F) in v	vailable. t applicable. ⊉ 739°C e. 13 @ 25°C (77°F)	Auto-ignitic Decomposi Viscosity: Molecular f	on temperature	ctanol / water): Data not availa :: Not applicable. I <b>re:</b> Data not available. I
Section 10	Stability and reactivity						
	: Stable id: Deliquescent material. Ab prials: Metals, acids, organic o	orbs moisture from			sodium carbor	nate.	
Hazardous decom	position products: Sodium c	xide. Reacts with n	netals to form flammable	e and explosive hyd	lrogen gas.		
Section 11	Toxicological information	on					
Carcinogenity: Da NTP: No componer IARC: No componer OSHA: No compon Ca Prop 65: This pr Reproductive toxi STOT-single expos	nt of this product present at levent of this product present at le ent of this product present at le roduct does not contain any ch city: Data not available	vels greater than or evels greater than o	equal to 0.1% is identifi r equal to 0.1% is identi	ed as probable, pos fied as a carcinoge	ssible or confiri n or potential c	med human card arcinogen by OS	
Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be Skin: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato	<b>posure:</b> Data not available : Data not available	auses skin burns. ns. ammation and eden ngitis, shortness of b	na of the larynx, spasm,	inflammation and e	edema of the b	ronchi, pneumor	
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Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: L0 Toxicity to fish: L0 Toxicity to algae: N Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal guregulations may be	posure: Data not available : Data not available ffects: harmful if inhaled. Material is a harmful if swallowed. Iful if absorbed through skin. C burns. Causes severe eye bur ms of exposure: Spasm, infl nsation, cough, wheezing, lary ry tract, eyes, and skin. ation: RTECS #: WB4900000 Ecological information C50 - Gambusia affinis (Mosqu a and other aquatic invertebr No data available egradability: No data available o data available ects: An environmental hazarco Disposal consideration uidelines are intended for the pedifferent. Dispose of in a	auses skin burns. ns. ammation and eden ngitis, shortness of t ito fish) - 125 mg/l - ates: Immobilizatio e Bioaccume PBT and vi cannot be excluded s e disposal of cata	na of the larynx, spasm, oreath, headache, nause 96 h n EC50 - Daphnia - 40.3 <b>ulative potential:</b> No d <b>PvB assessment:</b> No d d in the event of unprofe	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula	edema of the b ial is extremely disposal. ations may ap	ronchi, pneumor y destructive to t pply to empty c	tissue of the mucous membran container. State and/or loca
Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: Lo Toxicity to fish: Lo Toxicity to daphai Toxicity to algae: 1 Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gur regulations may b Section 14	posure: Data not available : Data not available ffects: harmful if inhaled. Material is a harmful if swallowed. Iful if absorbed through skin. C burns. Causes severe eye bur of a source: Spasm, infl nsation, cough, wheezing, lary ory tract, eyes, and skin. ation: RTECS #: WB4900000 Ecological information C50 - Gambusia affinis (Mosqu a and other aquatic invertebre No data available egradability: No data available o data available ects: An environmental hazarce Disposal consideration uidelines are intended for the be different. Dispose of in a Transport information	auses skin burns. ns. ammation and eden igitis, shortness of t ito fish) - 125 mg/l - ates: Immobilizatio e Bioaccume PBT and vi cannot be excluded s e disposal of cata ccordance with all	na of the larynx, spasm, oreath, headache, nauso 96 h n EC50 - Daphnia - 40.3 ulative potential: No d <b>PvB assessment:</b> No d in the event of unprofe log-size quantities on l local, state and fede	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula	edema of the b ial is extremely disposal. ations may ap	ronchi, pneumor y destructive to t pply to empty c	tissue of the mucous membran container. State and/or loca
Aspiration hazard Potential health of Inhalation: May be Ingestion: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: Lt Toxicity to fish: Lt Toxicity to daphnis Toxicity to daphnis Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gur regulations may b Section 14 UN/NA number: Hazard class: 8	posure:       Data not available         :       Data not available         iffects:       harmful if inhaled. Material is a harmful if swallowed.         iful if absorbed through skin. C       burns. Causes severe eye bur         iful if absorbed through skin. C       burns. Causes severe eyes bur         iful if absorbed through skin. C       burns. Causes severe eyes bur         ifun of exposure:       Spasm, infl         nsation, cough, wheezing, lary       pry tract, eyes, and skin.         ation:       RTECS #: WB4900000         Ecological information       C50 - Gambusia affinis (Mosquantion)         C50 - Gambusia affinis (Mosquantion)       No data available         egradability:       No data available         egradability:       No data available         odata available       prosoal consideration         uidelines are intended for the different.       Dispose of in a         Transport information       UN1823	auses skin burns. ns. ammation and eden igitis, shortness of t ito fish) - 125 mg/l - ates: Immobilizatio e Bioaccume PBT and vi cannot be excluded s e disposal of cata ccordance with all g name: Sodiur group: Il	na of the larynx, spasm, oreath, headache, nauso 96 h n EC50 - Daphnia - 40.3 ulative potential: No d PvB assessment: No d in the event of unprofe log-size quantities on l local, state and fede m hydroxide, solid <b>Reportab</b>	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula	disposal. ations may ap	onchi, pneumor y destructive to t pply to empty c a licensed che	tissue of the mucous membran container. State and/or loca
Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: Lo Toxicity to fish: Lo Toxicity to fish: Lo Toxicity to daphni Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gur regulations may b Section 14 UN/NA number: Hazard class: 8 Exceptions: Lin Section 15	posure:       Data not available         :       Data not available         iffects:       harmful if inhaled. Material is a harmful if swallowed.         iful if absorbed through skin. C       burns. Causes severe eye bur         iful if absorbed through skin. C       burns. Causes severe eyes bur         ifus of exposure:       Spasm, infl         insation, cough, wheezing, lary       pry         yry tract, eyes, and skin.       ation:         ation:       RTECS #: WB4900000         Ecological information       C50 - Gambusia affinis (Mosqu         a and other aquatic invertebr       No data available         egradability:       No data available         odata available       ects:         otas available       consideration         uidelines are intended for the       the different.         Disposal consideration       UN1823         Shipping       Packing         mited quantity equal to or le       Regulatory information	auses skin burns. ns. ammation and eden igitis, shortness of the ito fish) - 125 mg/l - ates: Immobilization e Bioaccume PBT and vices e disposal of cata coordance with all g name: Sodiur   group: Il ss than 1 Kg	na of the larynx, spasm, oreath, headache, nauso 96 h n EC50 - Daphnia - 40.3 ulative potential: No d PvB assessment: No d d in the event of unprofe log-size quantities on l local, state and fede m hydroxide, solid Reportab 2020 ERG	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula ral regulations or le Quantity: 1,0	disposal. ations may ap	onchi, pneumor y destructive to t pply to empty c a licensed che	tissue of the mucous membra container. State and/or loca emical disposal agency.
Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be barr Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: Lo Toxicity to fish: Lo Toxicity to fish: Lo Toxicity to daphai Toxicity to algae: 1 Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gur regulations may b Section 14 UN/NA number: Hazard Class: 8 Exceptions: Lin Section 15 A chemical is consider	posure:       Data not available         :       Data not available         iffects:       harmful if inhaled. Material is a harmful if swallowed.         iful if absorbed through skin. C       burns. Causes severe eye bur         iful if absorbed through skin. C       burns. Causes severe eyes bur         ifus of exposure:       Spasm, infl         insation, cough, wheezing, lary       pry         yry tract, eyes, and skin.       ation:         ation:       RTECS #: WB4900000         Ecological information       C50 - Gambusia affinis (Mosquation and other aquatic invertebre         No data available       egradability:         egradability:       No data available         odata available       odata available         odata available       edifferent.         Disposal consideration       uidelines are intended for the         uidelines are information       UN1823         Shipping       Packing         mited quantity equal to or le       Regulatory information         red to be listed if the CAS number of the code set of the code se	auses skin burns. ns. ammation and eden igitis, shortness of the ito fish) - 125 mg/l - ates: Immobilization e Bioaccume PBT and vices e disposal of cata coordance with all g name: Sodiur I group: Il ses than 1 Kg or the anhydrous form	na of the larynx, spasm, oreath, headache, nauso 96 h n EC50 - Daphnia - 40.3 ulative potential: No d PvB assessment: No d d in the event of unprofe log-size quantities on l local, state and fede m hydroxide, solid Reportab 2020 ERG	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula ral regulations or le Quantity: 1,0 i Guide # 154	disposal. ations may ap contract with	ronchi, pneumor y destructive to t pply to empty c a licensed che g) <b>Ma</b>	tissue of the mucous membran container. State and/or loca emical disposal agency. arine pollutant: No
Aspiration hazard Potential health ef Inhalation: May be Ingestion: May be harm Eyes: Causes eye Signs and sympto edema, burning ser and upper respirato Additional informa Section 12 Toxicity to fish: LC Toxicity to fish: LC Toxicity to daphnia Toxicity to algae: 1 Persistence and d Mobility in soil: N Other adverse effe Section 13 These disposal gur regulations may b Section 14 UN/NA number: Hazard class: 8 Exceptions: Lin Section 15	posure:       Data not available         :       Data not available         iffects:       harmful if inhaled. Material is a harmful if swallowed.         iful if absorbed through skin. C       burns. Causes severe eye bur         iful if absorbed through skin. C       burns. Causes severe eyes bur         ifus of exposure:       Spasm, infl         insation, cough, wheezing, lary       pry         yry tract, eyes, and skin.       ation:         ation:       RTECS #: WB4900000         Ecological information       C50 - Gambusia affinis (Mosquation and other aquatic invertebre         No data available       egradability:         egradability:       No data available         odata available       odata available         odata available       edifferent.         Disposal consideration       uidelines are intended for the         uidelines are information       UN1823         Shipping       Packing         mited quantity equal to or le       Regulatory information         red to be listed if the CAS number of the code set of the code se	auses skin burns. ns. ammation and eden igitis, shortness of the ito fish) - 125 mg/l - ates: Immobilization e Bioaccume PBT and vices e disposal of cata coordance with all g name: Sodiur   group: Il ss than 1 Kg	na of the larynx, spasm, oreath, headache, nauso 96 h n EC50 - Daphnia - 40.3 ulative potential: No d PvB assessment: No d d in the event of unprofe log-size quantities on l local, state and fede m hydroxide, solid Reportab 2020 ERG	inflammation and e ea, vomiting. Mater 38 mg/l - 48 h ata available data available essional handling or ly. Federal regula ral regulations or le Quantity: 1,0	disposal. ations may ap	onchi, pneumor y destructive to t pply to empty c a licensed che	tissue of the mucous membran container. State and/or loca emical disposal agency.

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

# GENERAL STORAGE CODE GREEN

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Section 1

Identification

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

221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only.

Not for drug, food or household use.

Product	ACETIC ACID, 0.1 MOLAR SOLUTION	
Synonyms	Acetic Acid, Water Solution	
Section 2	Hazards identification	
Pictograms Target orga GHS Classi Eye irritatior GHS Label	t: WARNING No symbol required ns: None known fication: (Category 2B) information: Hazard statement: es eye irritation.	Precautionary statement: P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention.

#### Hazards not otherwise classified:

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

Section 3 Composition / information on ingredients **Chemical Name** CAS # % EINECS Water 7732-18-5 99 41% 231-791-2 Acetic acid 64-19-7 0.59% 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. 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.

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 may react violently with strong oxidizers, generating a fire and explosion hazard. May react violently with strong bases, strong acids and many other compounds.

#### 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.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Acetic acid	TWA: 25 mg/m <sup>3</sup> STEL: 37 mg/m <sup>3</sup>	TWA: 25 mg/m <sup>3</sup>	TWA: 25 mg/m <sup>3</sup> STEL: 37 mg/m <sup>3</sup>			

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

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

approved respirator.								
Section 9	Physical and chemical	properties						
	odor. ata not available. ble. :: Approximately 0°C (32°F) (water) iximately 100°C (212°F) (water)	Flammability ( Explosion limi Vapor pressur Vapor density Relative density	te (Water = 1): <1 solid/gas): Data not a ts: Lower / Upper: D e (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appr : Complete in water.	Data not available r)	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re	
Section 10	Stability and reactivity							
	I: Excessive temperatures w	hich cause evaporat						
reaction with acetald	ehyde and acetic anhydride.	Ignites on contact w	ith potassium-tert-boto	oxide.			o some metals. Potentially violent	
Hazardous decomp	osition products: Carbon n	ionoxide, hydrogen	suifide and other harm	itul gases or vapors	including oxide	es and/or other o	compounds of sulfur and sodium.	
Section 11	Toxicological information	on						
Serious eye damag Respiratory or skin Germ cell mutagen Carcinogenity: Dat NTP: No component IARC: No component OSHA: No compone Ca Prop 65: This pro Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: May be h Ingestion: May be h Skin: Contact with a Signs and symptor Additional informat	tof this product present at levent of this product available ure: Data not available Data not available Data not available ects: armful if inhaled. armful if swallowed. kin may cause irritation and ceves may cause redness and the product of exposure: See Potent tion: RTECS #: AF1225000 Ecological information	evere irritant. [Acetic ilable els greater than or evels greater than or evels greater than or emicals known to th lryness. pain. ial health effects abo [Acetic acid, glacial]	acid, glacial] qual to 0.1% is identifi equal to 0.1% is identi equal to 0.1% is ident e State of California to state of California to	fied as probable, po tified as a carcinoge cause cancer or rep ate procedures to m	ssible or confiri n or potential c productive toxic	med human card arcinogen by OS city.	<b>o i</b>	
Toxicity to daphnia Toxicity to algae: E Persistence and de Mobility in soil: No	mbusia affinis (fish, fresh wat and other aquatic inverteb uglena gracilis (Algae), EC10 gradability: Easily biodegra data available ets: An environmental hazaro	ates: Daphnia mag 0 = 720 mg/L [Acetion dable Bioaccumu PBT and vi	na (Crustacea), EC50 c acid, glacial] Ilative potential: Not PvB assessment: No	= 95 mg/L/24 hours expected to bioaccu data available	umulate	lacial]		
Section 13	Disposal consideration							
	idelines are intended for th e different. Dispose of in a						container. State and/or local emical disposal agency.	
Section 14	Transport information			-				
UN/NA number: Hazard class: No Exceptions: No	ot applicable Pa	ipping name: N cking group: N 20 ERG Guide #	ot applicable	Reportable Qua	antity: No	Ма	arine pollutant: No	
Section 15	Regulatory information							
	d to be listed if the CAS number	•	-			NDO		
Compone Acetic acid, glacial		Listed	CERLCA (RQ) 5,000 lbs (2270 kg)	<b>RCRA code</b> D001, D002	DSL Listed	NDSL Not listed	CA Prop 65 This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.	
Section 16	Other information							
dent determinations of		formation from all sour	ces to assure proper use	of these materials and	the safety and h	ealth of employees	ered by them and must make indepen- s. NTP: National Toxicology Program, osure, RE: Repeated Exposure,	

хp ERG: Emergency Response Guidebook.

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Section 1

Identification

#### "Cutting edge science for the classroom" by Aldon (585) 221 Roc Avon, N (585) 225

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

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

1% PHENOLPHTHALEIN IN ISOPROPYL ALCOHOL SOLUTION Product Synonyms 1% Phenolphthalein in IPA Section 2 Hazards identification Signal word: DANGER Precautionary statement(s): Pictograms: GHS02 / GHS07 / GHS08 P201: Obtain special instructions before use Target organs: Central nervous system, Liver, Kidneys. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. 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. **GHS Classification:** P243: Take precautionary measures against static discharge. Flammable liquid (Category 2) P260: Do not breathe mist/vapours/spray. Eye irritation (Category 2) P264: Wash hands thoroughly after handling STOT-SE (Category 2) P271: Use only outdoors or in a well-ventilated area. Mutagenicity (Category 2) P280: Wear protective gloves/protective clothing/eye protection/face protection. Carcinogen (Category 1B) P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated Reproductive toxicity (Category 2) clothing. Rinse skin with water/shower. P304+P340: IF INHALED: Remove person to fresh air and keep in a position GHS Label information: Hazard statement(s): comfortable for breathing H225: Highly flammable liquid and vapour. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove H319: Causes serious eye irritation. contact lenses, if present and easy to do. Continue rinsing. H336: May cause drowsiness or dizziness. P312: Call a POISON CENTER or doctor if you feel unwell. H341: Suspected of causing genetic defects. P308+P313: IF exposed or concerned: Get medical attention. H350: May cause cancer. P337+P313: If eye irritation persists: Get medical attention. H361: Suspected of damaging fertility. P362+P364: Take off 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+P235: Store in a well-ventilated place. Keep cool. P501: Dispose of contents/container to a licensed chemical disposal agency in Hazards not otherwise classified: accordance with local/regional/national regulations. Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients						
Chemical Name		CAS #	%	EINECS			
lsopropyl alcohol Water Phenolphthalein		67-63-0 7732-18-5 77-09-8	70% 29% 1%	200-661-7 231-791-2 201-004-7			
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 EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

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

### Section 5 Fire fighting measures

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

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 Linits.	Isopropanol	TWA: 200 ppm / STEL: 400 ppm	TWA: 400 ppm / 980 mg/m <sup>3</sup>	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/MSHAapproved respirator.

Appearance: Clear, cold         Odor: Aromatic odor.         Odor threshold: Data n         pH: Data not available.         Melting / Freezing point: A         Boiling point: Approxima         Flash point: 21.7°C (71         Section 10       S         Chemical stability: Sta         Conditions to avoid: E         Incompatible materials         Hazardous decompositi         Section 11       T         Acute toxicity: Oral-rat         Skin corrosion/irritatio         Serious eye damage/irr	ot available. pproximately -50°C (-58°F)* tely 85-100°C (185-212°F)* °F) TCC [70% IPA] tability and reactivity	Evaporation ra Flammability ( Explosion limi Vapor pressur Vapor density Solubility(ies): Hazardo sparks, open fla caustics, alumin		available. 1% / 12% [Pure IPA] 20°C [Pure IPA] 24] Will not occur.	Auto-ignition Decompos Viscosity: Molecular	n temperature: 399	re				
Appearance: Clear, cold Odor: Aromatic odor. Odor threshold: Data n pH: Data not available. Melting / Freezing point: A Boiling point: Approxima Flash point: 21.7°C (71 Section 10 S Chemical stability: Sta Conditions to avoid: E Incompatible materials Hazardous decompositi Section 11 T Acute toxicity: Oral-rat Skin corrosion/irritatio Serious eye damage/ir	orless liquid. ot available. opproximately -50°C (-58°F)* tely 85-100°C (185-212°F)* °F) TCC [70% IPA] tability and reactivity ble xcessive temperatures, heat : Strong oxidizing materials, tion products: Oxides of ca	Evaporation ra Flammability ( Explosion limi Vapor pressur Vapor density Solubility(ies): Hazardo sparks, open fla caustics, alumin	solid/gas): Data not a ts: Lower / Upper: 2 e (mm Hg): 33 mm @ (Air = 1): 2.1 [Pure IP (Specific gravity): 0.8* complete in water. bus polymerization: \ ame and other sources	available. 1% / 12% [Pure IPA] 20°C [Pure IPA] 24] Will not occur.	Auto-ignition Decompos Viscosity: Molecular	n temperature: 399 ition temperatur Data not availabl formu la: Mixture	9°C (750°F) ASTM-E659-78 [Pure IF <b>re:</b> Data not available. ele. re				
Chemical stability: Sta Conditions to avoid: E Incompatible materials Hazardous decomposit Section 11 T Acute toxicity: Oral-rat Skin corrosion/irritatio Serious eye damage/ir	ble xcessive temperatures, heat : Strong oxidizing materials, <b>ion products</b> : Oxides of ca	, sparks, open fla caustics, alumin	ame and other sources								
Conditions to avoid: E Incompatible materials Hazardous decomposit Section 11 T Acute toxicity: Oral-rat Skin corrosion/irritatio Serious eye damage/ir	xcessive temperatures, heat : Strong oxidizing materials, ion products: Oxides of ca	, sparks, open fla caustics, alumin	ame and other sources								
Acute toxicity: Oral-rat Skin corrosion/irritatio Serious eye damage/irr	oxicological information		ano, motaio, muoiom	0	compounds c	an react vigorous	sly with this alcohol.				
Acute toxicity: Oral-rat Skin corrosion/irritatio Serious eye damage/irr					_	_					
Germ cell mutagenicity Carcinogenity: Data no NTP: Reasonably anticip IARC classified: Group 2 OSHA: No component o CA Prop 65: A WARNIN Reproductive toxicity: STOT-single exposure STOT-repeated exposure Aspiration hazard: Yes Potential health effects Inhalation: Inhalation of and irritation of the throa Ingestion: Aspiration ha develop if this occurs. Skin: Prolonged or repe Eyes: Contact causes b Signs and symptoms of	nsitization: Data not available bit available bit available bit available bit available bit available B: Possibly carcinogenic to high f this product present at leve IG! :This product can expose Data not available The substance or mixture is re: Data not available bits high vapor concentrations m t. Continued inhalation may	le gen. [Phenolphth numans. [Phenol is greater than or you to Phenolph s classified as sp ay cause central result in unconsi er the lungs (asp tion and drying, welling, and/or b nealth effects abo	Iphthalein] r equal to 0.1% is iden hthalein, which is know pecific target organ toxi l nervous system depro- ciousness and death. irated) when swallowe cracking and defatting lurred vision. ove.	vn to the State of Čal icant, single exposur ession resulting in diz d or vomited. Seriou g of the skin which ca	ifornia to caus e, category 3 v zziness, drows us lung damag	se cancer. with narcotic effect siness, nausea, v le and possible fa					
Section 12 E	cological information										
Toxicity to daphnia and Toxicity to algae: Scene Persistence and degrae Mobility in soil: No dat Other adverse effects: Section 13 C These disposal guidel	An environmental hazard ca Iisposal considerations	s: Daphnia mag ), LOEC50 = 1,8 Bioaccumu PBT and vi nnot be excluded	na (Crustacia), EC50 : 300 mg/l/7 days [Isopro ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o	= >10,000 mg/l/24 hc opanol] data available o data available fessional handling or only. Federal regula	disposal.	pply to empty c	container. State and/or local mical disposal agency.				
	ransport information										
UN/NA number: UN Hazard class: 3 Exceptions: Limited	1219 Shipping r Packing g I quantity equal to or less	•	Reportal	ble Quantity: No G Guide # 129		Ма	arine pollutant: No				
	egulatory information	a anharda d	to an disclose of the Post								
A chemical is considered to Component	be listed if the CAS number for t	ne anhydrous form	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65				
Isopropyl alcohol Phenolphthalein		Listed	Not listed Not listed	Not listed Not listed	Listed Listed	Not listed Not listed	WARNING -Cancer - www.P65Warnings.ca.gov.				
				i l							

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

# GENERAL STORAGE CODE GREEN

Page E1 of E2

Section 1

Identification

#### INNOVATING SCIENCE® by Aldon 221 Roc AVOL N

"Cutting edge science for the classroom"

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

METHYL RED, INDICATOR SOLUTION Product Synonyms Methyl Red, 0.02% Aqueous pH Indicator Solution Section 2 Hazards identification This substance or mixture has not been classified as hazardous according Supplementary information: to the Globally Harmonized System (GHS) of Classification and Labeling of Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear Chemicals. protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell. Signal word: Not classified Pictograms: Not classified Target organs: None known GHS Classification: Not classified GHS Label information: Hazard statement: Not classified Precautionary statement: Not classified

#### Hazards not otherwise classified:

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

Section 3 Composition	on / information on ingredients			
Chemical Name	CAS #	%	EINECS	
Water	7732-18-5	99.98%	231-791-2	
Methyl red, sodium salt	845-10-3	0.02%	212-682-9	
Section 4 First aid me	easures			

**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 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.

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 mist/vapors/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. Protect from light.

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

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

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

approved respirato	or.								
Section 9	Physical and chen	nical properties							
Odor: No odor. Odor threshold: pH: Data not avai Melting / Freezing po	pint: Approximately 0°C (32°F) ( proximately 100°C (212°F) (v	on rate (Water = 1): <1 ity (solid/gas): Data no limits: Lower / Upper: ssure (mm Hg): 14 (wat sity (Air = 1): 0.7 (water isity (Specific gravity): App ies): Complete in water.	Data not available er) ) proximately 1.0 (water	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re			
Section 10	Stability and react	ivity							
Chemical stability Conditions to avo	-	Haz	ardous polymerization: oration. Protect from ligh						
Incompatible mat	terials: Strong oxidizers,	reducing agents.							
Hazardous decon	mposition products: Car	bon oxides, nitrogen	oxides and sodium oxide	S.					
Section 11	Toxicological infor	rmation							
Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compone	ent of this product present nent of this product present nent of this product present product does not contain a	at levels greater than t at levels greater than nt at levels greater tha	n or equal to 0.1% is iden an or equal to 0.1% is ide	tified as probable, pos ntified as a carcinoger	ssible or confir n or potential o	med human care carcinogen by OS	0 1		
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Form 06/2015

# GENERAL STORAGE CODE GREEN

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Section 1

Identification

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

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

Product	<b>BROMOPHENOL BLUE, 0.04% AQUEOUS SOLUTION</b>	
Synonyms	Bromophenol Blue, Water Solution	
Section 2	Hazards identification	
to the Globa Chemicals. Signal word Pictograms	nce or mixture has not been classified as hazardous according ally Harmonized System (GHS) of Classification and Labeling of I: Not classified : Not classified ns: None known	Supplemental information: Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.
GHS Label i Precautiona <u>Hazards no</u> Health hazar	fication: Not classified information: Hazard statement: Not classified irry statement: Not classified by otherwise classified: rds not otherwise classified (HHNOC) - Not Known	
Physical haz Section 3	ards not otherwise classified (PHNOC) - Not Known	
Section 3	Composition / information on ingredients	

Section 3 Composition / information of	n ingredients			
Chemical Name	CAS #	%	EINECS	
Water Bromophenol blue, sodium salt	7732-18-5 62625-28-9	99.96% 0.04%	231-791-2 263-653-2	
Section 4 First aid measures				

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

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

#### Section 5 Fire fighting measures

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

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

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

# Section 6 Accidental release measures

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

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

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. Protect from light.

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

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

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

approved respirato							
Section 9	Physical and chem	nical properties					
pH: Data not avail Melting / Freezing poi	Data not available. lable. int: Approximately 0°C (32°F) (v proximately 100°C (212°F) (v	Water) Relative density Relative density	ate (Water = 1): <1 (solid/gas): Data not its: Lower / Upper: re (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): App : Complete in water.	Data not available er)	Auto-igniti Decompos Viscosity: Molecular	•	e: Data not available ure: Data not available. ble. re
Section 10	Stability and reacti	ivity					
	<b>bid:</b> Excessive temperature		<b>bus polymerization:</b> tion. Protect from ligh				
·	erials: Strong oxidizers.						
Hazardous decom	nposition products: Car	bon oxides, sulfur oxides	and bromine gas.				
Section 11 Acute toxicity: Da	Toxicological infor	mation					
Respiratory or ski Germ cell mutage Carcinogenity: D NTP: No compone IARC: No compone OSHA: No compor Ca Prop 65: This p Reproductive toxi STOT-single expo	age/irritation: Data not a cin sensitization: Data not enicity: Data not available ent of this product present nent of this product present nent of this product present rorduct does not contain a cicity: Data not available posure: Data not available	ot available e at levels greater than or e t at levels greater than or nt at levels greater than o iny chemicals known to th	equal to 0.1% is ident r equal to 0.1% is ider	ified as probable, pos ntified as a carcinoger	sible or confir or potential c	med human card arcinogen by OS	0,
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ERG: Emergency Response Guidebook.

Form 06/2015

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Section 1

Identification

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

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

Product	HYDROCHLORIC ACID, 0.1 MOLAR (0.1 NORMAL) SOLUTION	
Synonyms	Muriatic Acid, Water Solution / Hydrogen Chloride, Water Solution	
Section 2	Hazards identification	
Pictogram Target org 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 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention.

#### Hazards not otherwise classified:

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

Section 3	Composition / information on ingredients				
Chemical Name		CAS #	%	EINECS	
Water Hydrochloric acid		7732-18-5 7647-01-0	99.68% 0.314%	231-791-2 231-595-7	
Section 4	First aid measures				

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

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

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

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

#### Section 5 Fire fighting measures

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

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with metals produce hydrogen, which is flammable and may produce explosive mixtures with air.

### Section 6 Accidental release measures

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

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

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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

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

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linits.	Hydrogen chloride	STEL: C 2 ppm / C 2.98 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low. Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator

approved respirato	r.						
	No data available able <b>point:</b> ~ 0°C (~ 32°F) [w 00°C (212°F) [water]	vater] Evaporation Flammabilit Explosion I Vapor press Relative de	n rate ( = 1): < 1 y (solid/gas): No data imits: Upper/Lower: N sure (mm Hg): 14 [wate ity (Air = 1): 0.7 [water] nsity (Specific gravity) es): Complete.	lo data available er]	Auto-igniti Decompos Viscosity: Molecular	ion temperature	re.
Section 10	Stability and reactive	vity					
Chemical stability Conditions to avo	: Stable id: Containers may burst		dous polymerization: contact with water.	Will not occur.			
formaldehyde.	prials: Metals, bases, act		ls, oxidizing agents, hyd	roxides, amines, car	rbonates, cyani	des, sulfides, sul	lfites,
Section 11	Toxicological infor	mation					
Serious eye dama Respiratory or ski Germ cell mutage Carcinogenity: Di NTP: No compone IARC: Group 3: Nd OSHA: No compon Ca Prop 65: This pi Reproductive toxi STOT-single expo STOT-repeated ex Aspiration hazard Potential health ef Exercise appropria Inhalation: May be Ingestion: May be Skin: May cause i Eyes: May cause i Signs and sympto	nt of this product present of classifiable as to its card nent of this product preser roduct does not contain an city: Data not available sure: Data not available posure: Data not available : Data not available	vailable at this dilution. t available at levels greater than cinogenicity to humans int at levels greater than ny chemicals known to at this dilution. cle knowledge the chemic potential hazards. ial may cause irritation not available at this dilu	or equal to 0.1% is ident , n or equal to 0.1% is ide the State of California t al, physical and toxicolo to the tissue of the muc tion.	ntified as a carcinog o cause cancer or re gical properties hav	en or potential productive toxi e not been thor	carcinogen by C icity. roughly investiga	
Section 12	Ecological information	tion					
Toxicity to daphni Toxicity to algae: I Persistence and d Mobility in soil: N Other adverse effe	egradability: No data av o data available ects: An environmental ha	rtebrates: No data av railable Bioaccu PBT and azard cannot be exclue	ailable mulative potential: No vPvB assessment: N	data available o data available	or disposal.		
Section 13	Disposal considera						
regulations may b	e different. Dispose of	in accordance with					container. State and/or local emical disposal agency.
Section 14	Transport informat						
UN/NA number: Hazard class: N Exceptions: No	lot applicable	Shipping name: Packing group: 2020 ERG Guide	Not applicable	Reportable Qu	antity: No	Ma	arine pollutant: No
Section 15	Regulatory information						
	red to be listed if the CAS nur						
Compor		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hydrochloric acid, (		Listed	Not listed	Not listed	Not listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						

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

# CORROSIVE STORAGE CODE WHITE

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Section 1

Identification

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

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

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

	SODIUM HYDROXIDE, 0.1 MOLAR (0.1N) SOLUTION	
Synonyms	Sodium Hydroxide, Water Solution (0.1M)	
Section 2	Hazards identification	
Signal wor Pictogram Target org GHS Class Skin irritatio Eye Irritatio GHS Label H316: Caus	d: WARNING s: None required ans: Respiratory tract, gastrointestinal tract, eyes, skin.	Precautionary statement: P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention.

#### Hazards not otherwise classified:

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

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

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

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

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

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

#### Section 5 Fire fighting measures

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

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

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

# Section 6 Accidental release measures

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

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

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

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

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

Section 9						
	Physical and chemical pro	operties				
	lot applicable. able. <b>point:</b> ~ 0°C (~ 32°F) [water] 00°C (212°F) [water]	Evaporation rate (Water = 1): < 1 Flammability (solid/gas): Not applicate Explosion limits: Lower / Upper: Not Vapor pressure (mm Hg): 14 [water] Vapor density (Air = 1): 0.7 [water] Relative density (Specific gravity): 1.0 Solubility(ies): Complete in water.	applicable	Auto-ignitio Decompos Viscosity: Molecular 1	on temperature	e
Section 10	Stability and reactivity			1		
Chemical stability Conditions to avo	:Stable id:Can react with carbon dioxide	Hazardous polymerization: Wi e to form sodium carbonate.	ll not occur.			
•		npounds, organic nitro compounds. de. Reacts with metals to form flammable	and explosive hyd	rogen gas.		
Section 11	Toxicological information					
Carcinogenity: Da NTP: No componer IARC: No componer OSHA: No componer Ca Prop 65: This pr Reproductive toxi STOT-single expo	nt of this product present at levels ent of this product present at level ent of this product present at leve	greater than or equal to 0.1% is identified s greater than or equal to 0.1% is identifie els greater than or equal to 0.1% is identifi nicals known to the State of California to c	d as probable, pos ed as a carcinogen	sible or confir or potential c	med human car arcinogen by O	0,
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dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015