SAFETY DATA SHEET

Identification Section 1 Page E1 of E2

INNOVATING SCIENCE

"Cutting edge science for the classroom"

by Aldon Corporation 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.

ACETIC ANHYDRIDE Product

Synonyms Acetic Oxide / Acetyl Oxide / Acetic Acid, Anhydride / Ethanoic Anhydride

Section 2 Hazards identification

Signal word: DANGER

SDS No.: AA0019

Pictograms: GHS02 / GHS05 / GHS06 Target organs: Respiratory system, skin, eyes







GHS Classification:

Flammable liquid (Category 3) Acute toxicity, oral (Category 4) Acute toxicity, inhalation (Category 3) Acute toxicity, dermal (Category 5) Skin corrosion (Category 1B) Serious eye damage (Category 1)

GHS Label information: Hazard statement(s):

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H313: May be harmful if in contact with skin.

H314: Causes severe skin burns and eye damage.

H331: Toxic if inhaled.

Precautionary statement(s):

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground and 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/eye protection/face protection.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

P363: Wash contaminated clothing 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.

P405: Store locked up.

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

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Lachrymator, Reacts violently with water

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on ingredients						
Chemical Name		CAS#	%	EINECS			
Acetic anhydride		108-24-7	100%	203-564-8			
-							

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: MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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

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

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam. Do not get water inside container.

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

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

Section 6 Accidental release measures

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

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

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

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Never add water to this product.

Section 8	Exposure controls / personal protection							
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)				
Exposure Limits:	Acetic anhydride	TWA: 1 ppm 4 mg/m ³ STEL: C 3 ppm	TWA: 5 ppm 20 mg/m ³	STEL: C 5 ppm / C 20 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: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Physical and chemical properties Section 9

Appearance: Clear, colorless liquid. Odor: Strong, pungent odor.

Odor threshold: Data not available

pH: Data not available

Melting / Freezing point: -73°C (-100°F) **Boiling point:** 139.9°C (283.8°F) Flash point: 49°C (120.2°F) CC

Evaporation rate (= 1): Data not available. Flammability (solid/gas): Data not available Explosion limits: Upper/Lower: 2.7% / 10.3% Vapor pressure (mm Hg): 4 @ 20°C (68°F)

Vapor density (Air = 1): 3.52 Relative density (Specific gravity): 1.08

Solubility(ies): Slowly soluble, forming acetic acid.

Partition coefficient: Data not available. Auto-ignition temperature: 316°C (600.8°F) Decomposition temperature: Data not available. Viscosity: Data not available.

Molecular formula: $C_4H_6O_3$ Molecular weight: 102.09

Stability and reactivity Section 10

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Containers may burst when heated. Avoid contact with water. Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, acids, bases, reducing agents, moisture, alcohols, and finely divided metals.

Hazardous decomposition products: Carbon oxides.

Section 11 **Toxicological information**

Acute toxicity: Oral-rat LD50: 1,780 mg/kg; Dermal-rabbit LD50: 4,000 mg/kg; Vapor-rat LC50: 1,000 ppm/4hrs

Skin corrosion/irritation: Skin-rabbit - causes burns. Serious eye damage/irritation: Eyes-rabbit - Corrosive to eyes. Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

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

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

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

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

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful or fatal if inhaled. Material is extremeny 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 severe eye burns.

Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Additional information: RTECS #: AK1925000

Ecological information

Toxicity to fish: LC50 - Leuciscus idus (Fish, Fresh water) - 265 mg/l - 48 hours

Toxicity to daphnia and other aquatic invertebrates: EC50: Daphnia magna (Crustacea) 55 mg/l/24 hours

Toxicity to algae: TDK: Scenedesmus quadricauda (Algae) 3400 mg/l/8 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

UN/NA number: UN1715 Shipping name: Acetic anhydride

Hazard class: 8, (3) Packing group: || Reportable Quantity: 5,000 lbs (2,270 kg) Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 Lt. 2020 ERG Guide # 137

Section 15 Regulatory information

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	CA Prop 65
Acetic anhydride	Listed	5000 lb (2270 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or
						reproductive toxicity

Section 16 Other information

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

Revision Date: July 6, 2022 Supercedes: September 9, 2020 Form 06/2015

Section 1 Identification Page E1 of E2

INNOVATING SCIENCE®

"Cutting edge science for the classroom"

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

Product FERRIC NITRATE, 0.2 MOLAR SOLUTION

Synonyms Iron(III) Nitrate, Water Solution

Section 2 Hazards identification

Signal word: WARNING Pictograms: GHS07 Target organs: Blood



GHS Classification:

Acute toxicity (Category 5) Skin irritation (Category 2) Eye irritation (Category 2B)

GHS Label information: Hazard statement(s):

H303: May be harmful if swallowed. H315: Causes skin irritation. H320: Causes eye irritation.

Precautionary statement(s):

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor if you feel unwell. P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention. P362+P364: Take off contaminated clothing and wash before reuse.

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 Ferric nitrate, nonahydrate	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.

Section 7 Handling and storage Page E2 of E2

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

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

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
	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/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, yellowish liquid.

Odor: No odor

Odor threshold: Data not available.

pH: Data not available.

Melting / Freezing point: Approximately 0°C (32°F) (water)
Boiling point: Approximately 100°C (212°F) (water)

Flash point: Data not available

Evaporation rate (Water = 1): <1
Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water)

Vapor density (Air = 1): 0.7 (water)
Relative density (Specific gravity): Approximately 1.0 (water)

Solubility(ies): Complete in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.

Marine pollutant: No

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures to cause evaporation.

Incompatible materials: Aluminum, cyanides, phosphorous, stannous chloride, thiocyanate. Oxidizable materials including sulfur, organic materials and sodium hypo-

phosphite.

Hazardous decomposition products: Nitrogen oxides.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 3,250 mg/kg [Ferric nitrate] Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

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

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

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

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

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful if inhaled.
Ingestion: May be harmful if swallowed.
Skin: Contact with skin may cause irritation.
Eves: Contact with eves 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 #: NO7175000 [Ferric nitrate]

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 regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number:Not applicableShipping name:Not RegulatedHazard class:Not applicablePacking group:Not applicable

g group: Not applicable Reportable Quantity: No

Exceptions: Not applicable 2020 ERG Guide # 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.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ferric nitrate (solid)	Listed	1,000 lbs (454 kg)	D001	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 Revision Date: October 7, 2022 Supercedes: September 29, 2020

CORROSIVE STORAGE CODE WHITE

Section 1 Identification Page E1 of E2

INNOVATING SCIENCE®

"Cutting edge science for the classroom"

® by Aldon Corporation 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, 3 MOLAR (3 NORMAL) SOLUTION

Synonyms Muriatic Acid, Water Solution; Hydrogen Chloride, Water Solution

Section 2 Hazards identification

Signal word: WARNING **Pictograms:** GHS05

Target organs: Respiratory system, skin, eyes, lungs.



GHS Classification:

Corrosive to metals (Category 1) Skin irritant (Category 3) Eye irritant (Category 2B)

GHS Label information: Hazard statement(s):

H290: May be corrosive to metals. H316: Causes mild skin irritation. H320: Causes eve irritation. Precautionary statement(s):

P234: Keep only in original container.

P264: Wash hands thoroughly after handling.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical attention. P337+P313: If eye irritation persists: Get medical attention.

P390: Absorb spillage to prevent material damage.

P406: Store in corrosive resistant container with a resistant inner liner.

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	90.57%	231-791-2	
Hydrochloric acid	7647-01-0	9.43%	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.

Section 7 Handling and storage Page E2 of E2

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

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

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure 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/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid.

Odor: Pungent odor.

Odor threshold: Data not available.

pH: N/A

Melting / Freezing point: Approx. 0°C (32°F) [water] Boiling point: Approx. 100°C (212°F) [water]

Flash point: Not flammable.

Evaporation rate (= 1): Data not available.
Flammability (solid/gas): Data not available.
Explosion limits: Upper/Lower: Data not available.
Vapor pressure (mm Hg): 14 [water]

Relative density (Specific gravity): 1.0 [water]

Solubility(ies): Soluble in water.

Vapor density (Air = 1): 0.7 [water]

Partition coefficient: (n-octanol / water): Data not available.

Auto-ignition temperature: Data not available. Decomposition temperature: Data not available.

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Containers may burst when heated. Avoid contact with water.

Incompatible materials: Metals, bases, active metals, alkali metals, oxidizing agents, hydroxides, amines, carbonates, cyanides, sulfides, sulfites,

ormaldehyde

Hazardous decomposition products: Hydrogen chloride 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.

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 at this dilution.

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 swallowed. 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 fish: LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric acid)

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

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

Section 13 Disposal considerations

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

Section 14 Transport information

UN/NA number: UN1789 Shipping name: Hydrochloric acid

Hazard class: 8 Packing group: III Reportable Quantity: 5000 lbs (2270 kg) Marine pollutant: No Exceptions: Limited quantity equal to or less than 5 Lt 2020 ERG Guide # 157

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hydrochloric acid	Listed	Not listed	D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or
						reproductive toxicity.

Section 16 Other information

The information contained 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 Revision Date: October 18, 2022 Supercedes: October 1, 2020

Section 1 Identification Page E1 of E2

INNOVATING SCIENCE®

"Cutting edge science for the classroom"

® by Aldon Corporation 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 METHYL SALICYLATE

Section 2 Hazards identification

Synthetic Oil of Wintergreen

Signal word: WARNING Pictograms: GHS07 Target organs: None known.



Synonyms

GHS Classification:

Acute toxicity, oral (Category 4)

GHS Label information: Hazard statement(s):

H302: Harmful if swallowed.

Precautionary statement(s):

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or

doctor if you feel unwell.

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

Hazards not otherwise classified:

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

Section 3 Compos	ition / information on ingredients			
Chemical Name	CAS#	%	EINECS	
Methyl salicylate	119-36-8	100%	204-317-7	

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 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam. Water may cause frothing.

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water on oil fires with caution. Oil is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water would not be contained.

Section 6 Accidental release measures

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

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

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

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

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

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

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

Section 9 Physical and chemical properties

Appearance: Clear, yellow to reddish liquid. Odor: Strong aromatic odor of wintergreen. Odor threshold: Data not available.

pH: Data not available

Melting / Freezing point: -8.6°C (17°F)

Boiling point: 219-224°C (426-435°F) Flash point: 101°C (214°F) CC

Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 1 @ 54°C

Relative density (Specific gravity): 1.18 Solubility(ies): Very slighty soluble in water.

Vapor density (Air = 1): 5.24

Partition coefficient: Data not available Auto-ignition temperature: 454°C (850°F) Decomposition temperature: Data not available.

Marine pollutant: No

Viscosity: Data not available.

Molecular formula: HOC₆H₄COOCH₃

Molecular weight: 152.15

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures and heat. Incompatible materials: Strong oxidizers, acids, alkalies. Hazardous decomposition products: Oxides of carbon.

Section 11 **Toxicological information**

Acute toxicity: Oral-rat LD50: 887 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: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

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

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause symptoms same as those described for ingestion.

May cause lung damage. May be harmful if inaled

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. May cause nausea and vomiting.

Skin: Contact causes irritation. May be harmful if absorbed through the skin.

Eves: Causes irritation.

Signs and symptoms of exposure: Chronic exposure may cause liver and kidney damage. Repeated exposure may cause metabolic disturbances. May cause fetal effects according to animal studies. Additional information: RTECS #: VO4725000

Section 12 **Ecological information**

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: Daphnia: 50 mg/L/24H - Fish: Water flea: >100 mg/L/96H

Toxicity to algae: No data available

Persistence and degradability: No data available Bioaccumulative potential: 100%-7D 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.

Disposal considerations

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

Section 14 Transport information

UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No

2020 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

Transmissing contraction to be noted in the circle manufacture and the ministraction for								
Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65		
Methyl salicylate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or		
						reproductive toxicity		

Section 16 Other information

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

Revision Date: October 25, 2022 Supercedes: October 8, 2020 Form 06/2015

Identification Section 1 Page E1 of E2

INNOVATING SCIENCE® by Aldon Corporation 221 Rochester Street

"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.

PHOSPHORIC ACID, 85% Product

Synonyms ortho-Phosphoric Acid

Section 2 Hazards identification

Signal word: DANGER Pictograms: GHS05 / GHS06

Target organs: Respiratory system, circulatory system, gastrointestinal tract, blood,

eves, skin



GHS Classification:

Acute toxicity, oral (Category 4) Acute toxicity, dermal (Category 5) Skin corrosion (Category 1B) Eye damage (Category 1) Acute toxicity, inhalation (Category 2)

GHS Label information: Hazard statement(s):

H302: Harmful if swallowed

H313: May be harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H330: Fatal if inhaled.

Precautionary statement(s):

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.

P284: Wear respiratory protection.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor.

P363: Wash contaminated clothing 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 local/regional/national regulations.

Hazards not otherwise classified:

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

Section 3	Composition / information on ingredients							
Chemical Name		CAS#	%	EINECS				
Phosphoric acid Water		7664-38-2 7732-18-5	85% 15%	231-633-2 231-791-2				

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 FATAL IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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

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

Section 5 Fire fighting measures

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

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

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with reactive metals, e.g. aluminum, may result in the generation of flammable hydrogen gas.

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 with sodium bicarbonate, absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale 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)				
	Phosphoric acid	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 3 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.

Partition coefficient: Data not available.

Viscosity: Data not available.

Molecular formula: H₃PO₄

Molecular weight: 98.00

Auto-ignition temperature: Data not available

Decomposition temperature: Data not available.

Respiratory protection: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Physical and chemical properties Section 9

Appearance: Clear, colorless liquid. Odor: No odor. Odor threshold: Data not available

pH: <1 @ 1 wt/wt%

Melting / Freezing point: -17 to 21°C (1.4 to 5.8°F)

Boiling point: 135-158°C (275-316°F) Flash point: Not flammable

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures.

Incompatible materials: Strong oxidizers, strong reducing agents, fluorine, bases, sulfur trioxide, phosphorus pentoxide, and finely divided metals.

Evaporation rate (= 1): Data not available.

Flammability (solid/gas): Data not available.

Vapor density (Air = 1): Data not available

Solubility(ies): Miscible in water.

Explosion limits: Upper/Lower: Not flammable

Vapor pressure (mm Hg): 5.65 to 2.16 @ 20°C (68°F)

Relative density (Specific gravity): >1.573 @ 25°C (77°F)

Hazardous decomposition products: Phosphorous oxides.

Section 11 **Toxicological information**

Acute toxicity: Oral-rat LD50: 1,530 mg/kg; Dermal-rabbit LD50: 2,740 mg/kg; Inhalation-rabbit LC50: 1.689 mg/l/4 hours

Skin corrosion/irritation: Skin-rabbit - causes burns. Serious eye damage/irritation: Eyes-rabbit - Corrosive to eyes. Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

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

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

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

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

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: May be harmful or fatal if inhaled. Material is extremeny 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 severe eye burns and corneal damage.

Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Additional information: RTECS #: TB6300000

Section 12 **Ecological information**

Toxicity to fish: LC50: Mosquitofish 138 mg/l/96 hours - Practically nontoxic 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

UN/NA number: UN1805 Shipping name: Phosphoric acid, solution

Hazard class: 8 Packing group: III Reportable Quantity: 5,000 lbs (2,270 kg) Marine pollutant: No

Exceptions: Limited quantity equal to or less than 5 Lt. 2020 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.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Phosphoric acid	Listed	5000 lb (2270 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or
						reproductive toxicity.

Section 16 Other information

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

Supercedes: October 13, 2020 Form 06/2015 Revision Date: November 2, 2022

Identification Section 1 Page E1 of E2

INNOVATING SCIENC

"Cutting edge science for the classroom"

by Aldon Corporation 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, 3 MOLAR (3N) SOLUTION **Product**

Synonyms Sodium Hydroxide, Water Solution (3M)

Section 2 Hazards identification

Signal word: DANGER Pictograms: GHS05

SDS No.: SS0574

Target organs: Respiratory tract, gastrointestinal tract, eyes, skin.



GHS Classification:

Skin corrosion (Category 1A)

Serious Eye Damage/ Eye Irritation (Category 1)

GHS Label information: Hazard statement:

H314: Causes severe skin burns and eye damage.

Precautionary statement:

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove

contact lenses, if present and easy to do. Continue rinsing

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all

contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor/physician.

P363: Wash contaminated clothing before reuse.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

Hazards not otherwise classified:

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

Section 3 Composition / inform	Composition / information on ingredients						
Chemical Name	CAS#	%	EINECS				
Water Sodium hydroxide	7732-18-5 1310-73-2	88% 12%	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.

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)				
	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.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid. Odor: No odor. Odor threshold: Not applicable.

pH: Data not available

Melting / Freezing point: ~ 0°C (~ 32°F) [water] Boiling point: ~ 100°C (212°F) [water]

Flash point: Not flammable.

Evaporation rate (Water = 1): < 1 Flammability (solid/gas): Not applicable. Explosion limits: Lower / Upper: Not applicable

Vapor pressure (mm Hg): 14 [water] Vapor density (Air = 1): 0.7 [water]

Relative density (Specific gravity): 1.0 [water]

Solubility(ies): Complete in water.

Partition coefficient: (n-octanol / water): Not applicable

Auto-ignition temperature: Not applicable Decomposition temperature: Data not available.

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: 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

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 probable, possible or confirmed human carcinogen by IARC.

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

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

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: May 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 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.

Disposal considerations

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

Section 14 Transport information

UN/NA number: UN1824 Shipping name: Sodium hydroxide solution

Hazard class: 8 Packing group: || Reportable Quantity: 1,000 lbs (454 kg) Marine pollutant: No

2020 ERG Guide # 154 **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.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sodium hydroxide	Listed	1,000 lbs (454 kg)	D002	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