

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.31.2015

Cupric Hydroxide

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Cupric Hydroxide
Manufacturer/Supplier Trade name:
Manufacturer/Supplier Article number: CU1080-15G
Recommended uses of the product and restrictions on use: Laboratory chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:



Toxic

Acute toxicity (oral, dermal, inhalation), category 2



Irritant

Acute toxicity (oral, dermal, inhalation), category 4



Corrosive

Serious eye damage, category 1



Environmentally Damaging

Acute hazards to the aquatic environment, category 1
Chronic hazards to the aquatic environment, category 2

Acute Oral Tox. 4.
Acute Inhal. Tox. 2.
Eye corr. 1.
Aquatic Acute 1.
Aquatic Chronic 2.

Signal word: Danger

Hazard statements:

Fatal if inhaled.
Harmful if swallowed.
Causes serious eye damage.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

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Precautionary statements:

If medical advice is needed have product container or label at hand.
 Keep out of reach of children.
 Read label before use.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Use only outdoors or in a well-ventilated area.
 Wear respiratory protection.
 Wash skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid release to the environment.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Immediately call a POISON CENTER or doctor/physician.
 Specific treatment is urgent (see ... on this label).
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 Rinse mouth.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
 Continue rinsing.
 Collect spillage.
 Store in a well ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 20427-59-2	Cupric Hydroxide	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek immediate medical assistance.

After skin contact:

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Immediately get medical assistance.

After swallowing:

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately get medical assistance.

Most important symptoms and effects, both acute and delayed:

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Irritation. Shortness of breath. Headache. Nausea. Dizziness. Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Copper poisoning may occur if vomiting does not occur immediately. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Copper oxides.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. Refer to Section 8.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wear personal protective equipment. Avoid ingestion and inhalation. Avoid dust formation. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

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SECTION 8: Exposure controls/personal protection

**Control parameters:**

20427-59-2, Copper dihydroxide, NIOSH PEL TWA 1 mg/m3.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Pale blue powder	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not determined	Relative density:	3.71 g/cm ³ at 20 °C (68 °F)
Melting/Freezing point:	80 °C	Solubilities:	Slightly in water.
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

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Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials. excess heat. Dust generation.

Incompatible materials:

Strong acids.

Hazardous decomposition products:

Copper oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD50 Rabbit: >3160 mg/kg 20427-59-2 (Cupric Hydroxide).

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation:

Rabbit: Corrosive to eyes. 20427-59-2 (Cupric Hydroxide).

Respiratory or skin sensitization: No additional information.

Carcinogenicity:

Not listed as a carcinogen (ACGIH, IARC, NTP): 20427-59-2 (Cupric Hydroxide)

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability:

Not expected to biodegrade.

Bioaccumulative potential:

This material is expected to bioaccumulate significantly.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers

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as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA 3288

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Toxic solid, inorganic, n.o.s. (Copper dihydroxide).

Hazard Class: 6

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Toxic solid, inorganic, n.o.s. (Copper dihydroxide).

Hazard Class: 6

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

20427-59-2 Copper dihydroxide (listed under copper compounds).

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

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Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-0

HMIS: 4-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms: None

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Cupric Oxide,ACS

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Cupric Oxide,ACS
Manufacturer/Supplier Trade name:
Manufacturer/Supplier Article number: CO1000-15G
Recommended uses of the product and restrictions on use: Laboratory chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:



Environmentally Damaging

Aquatic Acute 1.
Aquatic Chronic 3.

Signal word: Warning

Hazard statements:

Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid release to the environment.
Collect spillage.
Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:

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Cupric Oxide,ACS		
CAS 1317-38-0	Cupric Oxide	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

After skin contact:

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Seek medical attention if irritation persists or concerned.

After swallowing:

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use means suitable to extinguishing surrounding fire.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Copper oxides.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Always obey local regulations. If necessary use trained response

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Cupric Oxide,ACS

staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Pick up and arrange disposal without creating dust. Sweep up and shovel. Avoid dust generation. Refer to Section 8.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid dust generation. Use with adequate ventilation. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Keep in a dry place.

SECTION 8: Exposure controls/personal protection



Control parameters:

1317-38-0, copper Oxide, NIOSH PEL TWA 0.1 mg/m³.
1317-38-0, Copper Oxide, OSHA PEL TWA 1 mg/m³ (copper dust and mist).
1317-38-0, copper Oxide, OSHA PEL TWA 0.1 mg/m³ (Copper Fumes).

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	black solid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined

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Cupric Oxide,ACS			
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not applicable	Vapor density:	Not determined
pH-value:	Not applicable	Relative density:	6.315 g/cm ³
Melting/Freezing point:	1326°C / 2418.80°F	Solubilities:	Insoluble in water
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing. Forms explosive acetylides with acetylene in caustic solutions. Exposure to moist air at > 212F can result in spontaneous combustion. Explodes when heated with powdered aluminum; anilinium perchlorate; hydrogen; magnesium; and phthalic anhydride.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Reducing agents. Hydrogen sulfide gas. Aluminium. Alkali metals. Powdered metals.

Hazardous decomposition products:

Copper fumes.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD50 Rabbit: >2000 mg/kg 1317-38-0 (Cupric Oxide).

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Rabbit: No skin irritation. 1317-38-0 (Cupric Oxide).

Serious eye damage/irritation:

Rabbit: mild eye irritation 1317-38-0 (Cupric Oxide).

Respiratory or skin sensitization:

guinea pig - Does not cause skin sensitisation.

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Cupric Oxide,ACS

Carcinogenicity:

Not listed as a carcinogen (ACGIH, IARC, NTP): 1317-38-0 (Cupric Oxide)

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Fish LC50 - Oncorhynchus mykiss (rainbow trout) - 0.19 - 0.21 mg/l - 96 h, 1317-38-0 (Cupric Oxide).

Invertebrates EC50 - Daphnia magna (Water flea) - 0.011 - 0.039 mg/l - 48 h, 1317-38-0 (Cupric Oxide).

Persistence and degradability:

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

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Cupric Oxide,ACS

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

1317-38-0 Copper oxide.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms: None

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Sodium Acetate

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Sodium Acetate

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: SA1050-15G

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture: Not classified for physical or health hazards under GHS.
Hazards Not Otherwise Classified - Combustible Dust.

Signal word: None

Hazard statements: None

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 127-09-3	Sodium Acetate, Anhydrous, ACS	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

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Sodium Acetate

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen. Give artificial respiration if necessary.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. Neutralize the soaking solution with sodium hydroxide solution.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Water spray. Dry chemical powder. Carbon dioxide. Alcohol foam. Polymer foam. If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Advice for firefighters:

Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Transfer to a disposal or recovery container. Avoid contact with eyes, skin, and clothing. Use spark-proof tools and explosion-proof equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

Environmental precautions:

Not relevant considering the small amounts used.

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Sodium Acetate

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air. Collect solids in powder form using vacuum with HEPA filter.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Minimize dust generation and accumulation. Wash hands after handling. Avoid dispersal of dust in the air. Do not mix with bases. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid generation of dust or fine particulate. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Store with like hazards.

SECTION 8: Exposure controls/personal protection



Control parameters:

, , OSHA PEL TWA (Total Dust) 15 mg/m³ (50 mppcf*).
, , ACGIH TLV TWA (inhalable particles) 10 mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Acetate

General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	White solid	Explosion limit lower: Explosion limit upper:	Not determined Not determined
Odor:	Odorless to slight acetic odor	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not determined	Relative density:	Not determined
Melting/Freezing point:	324 C	Solubilities:	Very soluble.; 1190g/L (20 C)
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		
Additional property:	Hygroscopic		
Specific Gravity:	Approx. 1.8		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

No decomposition if used and stored according to specifications. Hygroscopic.

Possible hazardous reactions:

Explosive mixture may form with fluorine and potassium nitrite.

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous decomposition products:

Carbon oxides (CO, CO₂). Oxides of sodium.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Acetate

Dermal LD50 Rabbit >10 g/kg.

Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Water Flea., 48 Hr EC50 Daphnia magna: >1000 mg/L.

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Acetate

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Acetate

PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Methanol (Methyl Alcohol)

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: ME1000-D

Recommended uses of the product and restrictions on use: Dec 15 2015 12:00AM

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:



Flammable

Flammable liquids, category 2



Toxic

Acute toxicity (oral, dermal, inhalation), category 3



Health hazard

Specific target organ toxicity following single exposure, category 1

AcTox Dermal. 3.
Flammable liq. 2.
AcTox Oral. 3.
AcTox Inhaln. 3.
Stot SE. 1.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapour.
Toxic if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Causes damage to organs.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

Read label before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Specific treatment (see supplemental first aid instructions on this label).
IF ON SKIN: Wash with soap and water.
Call a POISON CENTER or doctor/physician if you feel unwell.
Specific measures (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Wash contaminated clothing before reuse.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF exposed: Call a POISON CENTER or doctor/physician.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Store locked up.
Store in a well ventilated place. Keep cool.
Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 67-56-1	Methanol	>90 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical attention immediately. If breathing is difficult, give oxygen. Give artificial respiration if necessary.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Rinse or flush eye gently with water for at least 15-20 minutes, lifting upper and lower lids. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Dilute mouth with water or milk after rinsing. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Poison. Irritation- all routes of exposure. Toxic by ingestion, absorption through skin and inhalation, potentially causing irreversible effects. Irritating to eyes, respiratory system and skin. Cannot be made non-poisonous. May

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Methanol (Methyl Alcohol)

cause gastrointestinal irritation, vomiting, and diarrhea. Skin disorders. Preexisting eye disorders. Gastrointestinal System. Shortness of breath. Nausea. Headache. May be fatal or cause blindness if swallowed. Central nervous system disorders. Toxic. Danger of very serious irreversible effects by inhalation, ingestion or absorption through skin. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse kidney and liver effects.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Dry chemical, foam, dry sand, or Carbon Dioxide. Water spray can keep containers cool.

Unsuitable extinguishing agents:

Water may be ineffective.

Special hazards arising from the substance or mixture:

Risk of ignition. Vapors may form explosive mixtures with air. Vapors can flow across ignition source and flashback. Containers may explode when heated.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Remove all sources of ignition. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Take precautions against static discharge.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Use spark-proof tools and explosion-proof equipment. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with eyes, skin, and clothing. Remove sources of ignition. Take precautions against static discharge.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. Remove all sources of ignition. Contain spillage and then collect. Do not flush to sewer. Absorb with a noncombustible absorbent material such as sand or earth and containerize for disposal. Ventilate area of leak or spill. Use spark-proof tools and explosion-proof equipment. Follow proper disposal methods. Refer to Section 13.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Use in a chemical fume hood. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Keep container tightly closed. Store with like hazards. Protect from freezing and physical damage.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

SECTION 8: Exposure controls/personal protection



Control parameters:

67-56-1, Methanol., ACGIH: 250 ppm STEL; 200 ppm TWA.
67-56-1, Methanol., NIOSH: 250 ppm STEL; 325 mg/m³ STEL.
67-56-1, Methanol., NIOSH: 200 ppm TWA; 260 mg/m³ TWA.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area. Use in chemical fume hood.

Respiratory protection:

Use in a chemical fume hood. If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear colorless liquid	Explosion limit lower:	6
		Explosion limit upper:	31
Odor:	Alcohol	Vapor pressure at 20°C:	128 hPa @ 20°C
Odor threshold:	Not available	Vapor density:	1.11
pH-value:	Not available	Relative density:	0.79
Melting/Freezing point:	-98°C	Solubilities:	Miscible at 20 °C
Boiling point/Boiling range:	64.7°C @ 760mmHg	Partition coefficient (n-octanol/water):	Not available
Flash point (closed cup):	12°C	Auto/Self-ignition temperature:	455°C
Evaporation rate:	5.2	Decomposition temperature:	Not available
Flammability (solid, gaseous):	Flammable	Viscosity:	a. Kinematic: Not available b. Dynamic: Not available
Density at 20°C:	Not available		

SECTION 10: Stability and reactivity

Reactivity:

Vapours may form explosive mixture with air.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

None under normal processing.

Conditions to avoid:

Excess heat, Incompatible Materials, flames, or sparks.

Incompatible materials:

Oxidizing agents, reducing agents, alkali metals, acids, sodium, potassium, metals as powders, acid chlorides, acid anhydrides, powdered magnesium, and aluminum.

Hazardous decomposition products:

carbon monoxide, formaldehyde.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD-50 15800 mg/kg (rabbit).

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Irritating to skin.

Serious eye damage/irritation:

Irritating to eyes.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity:

Mutagenic effects have occurred in experimental animals.

Teratogenicity has occurred in experimental animals.

Reproductive Toxicity:

Developmental Effects (Immediate/Delayed) have occurred in experimental animals.

STOT-single and repeated exposure:

Classified as causing damage to organs:

Eyes, skin, optic nerve, gastrointestinal tract, central nervous system, respiratory system, liver, spleen, kidney, blood.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Freshwater Fish, 96 Hr LC50 Pimephales promelas: 28200 mg/L.

Freshwater Fish, 96 Hr LC50 Oncorhynchus mykiss: 19500 - 20700 mg/L.

Freshwater Fish, 96 Hr LC50 Pimephales promelas: >100 mg/L.

Freshwater Fish, 96 Hr LC50 Oncorhynchus mykiss: 18 - 20 mL/L.

Freshwater Fish, 96 Hr LC50 Lepomis macrochirus: 13500 - 17600 mg/L.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

Persistence and degradability:

Not persistent.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Methanol RCRA waste code U154. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Absorb with a noncombustible absorbent material such as sand or earth and containerize for disposal. Provide ventilation. Have fire extinguishing agent available in case of fire. Eliminate all sources of ignition. Use spark-proof tools and explosion-proof equipment. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

UN1230

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Methanol.

Hazard Class: 3

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Methanol.

Hazard Class: 3

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic, Fire

SARA Section 313 (Specific toxic chemical listings):

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

67-56-1 Methanol.

RCRA (hazardous waste code):

67-56-1 Methanol RCRA waste code U154.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

67-56-1 Methanol 5000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

67-56-1 Methanol.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.

PNEC. Predicted No-Effect Concentration (REACH).

CFR Code of Federal Regulations (USA).

SARA Superfund Amendments and Reauthorization Act (USA).

RCRA. Resource Conservation and Recovery Act (USA).

TSCA. Toxic Substances Control Act (USA).

NPRI National Pollutant Release Inventory (Canada).

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Methanol (Methyl Alcohol)

DOT US Department of Transportation.

IATA International Air Transport Association.

GHS Globally Harmonized System of Classification and Labelling of Chemicals.

ACGIH American Conference of Governmental Industrial Hygienists.

CAS Chemical Abstracts Service (division of the American Chemical Society).

NFPA National Fire Protection Association (USA).

HMIS Hazardous Materials Identification System (USA).

WHMIS Workplace Hazardous Materials Information System (Canada).

DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.05.2014

Sulfuric Acid, 12.0N

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Sulfuric Acid, 12.0N

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMSA1692-D

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:



Health hazard

Carcinogenicity, category 1A



Corrosive

Skin corrosion, category 1A
Serious eye damage, category 1
Corrosive to metals, category 1

Acute hazards to the aquatic environment, category 3

Skin Corrosion 1A.

Carcinogenic 1 (Strong inorganic acid mists/aerosols containing sulfuric acid).

Corrosive to metals. 1.

Eye corrosion 1.

Acute aquatic toxicity 3.

Signal word: Danger

Hazard statements:

May be corrosive to metals.

May cause cancer.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Harmful to aquatic life.

Precautionary statements:

If medical advice is needed have product container or label at hand.

Keep out of reach of children.

Read label before use.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.05.2014

Sulfuric Acid, 12.0N

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep only in original container.
Avoid release to the environment.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see supplemental first aid instructions on this label).
IF exposed or concerned: Get medical advice/attention.
Absorb spillage to prevent material damage.
Store locked up.
Store in a corrosive resistant container with a resistant inner liner.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 7664-93-9	Sulfuric Acid	62.008 %
CAS 7732-18-5	Deionized Water	37.992 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Provide oxygen if breathing is difficult. Seek immediate medical advice.

After skin contact:

Rinse thoroughly. Rinse/flush exposed area gently using water for at least 30 minutes. Seek immediate medical assistance. Remove contaminated clothing and discard. Neutralize the soaking solution with sodium hydroxide solution.

After eye contact:

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse/flush exposed eye(s) gently using water for at least 30 minutes. Seek immediate medical assistance. Rinse under the eyelids during flushing.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Do not induce

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Effective date : 12.05.2014

Sulfuric Acid, 12.0N

vomiting. Seek immediate medical assistance.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath. Burning of eyes or skin. Coughing. Strong inorganic acid mists containing sulfuric acid can cause cancer. Lung damage, chronic bronchitis. Damage to teeth and stomach.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Use of soap may assist with neutralization on exposed skin in conjunction with flushing.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use dry Chemical, foam, or carbon dioxide to extinguish fire.

Unsuitable extinguishing agents:

Do not use water directly on sulfuric acid.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Poisonous sulfur oxides are combustion products. Aerosols or mist may be produced in a fire. Sulfuric acid may ignite combustibles.

Advice for firefighters:

Protective equipment:

Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment for fire and chemical resistance.

Additional information (precautions):

Containers may explode.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Neutralize with lime or soda ash. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Always obey local regulations. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Do not use water. Neutralize with lime or soda ash. Add water to form slurry. Decant water to drain with excess water. Dispose of remaining solid as normal refuse.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Do not mix with bases. Wash hands after handling. Avoid contact with eyes, skin, and clothing. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wear protective clothing and equipment. Do not

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handle with incompatibles (see Section 10). Avoid ingestion and inhalation.

Conditions for safe storage, including any incompatibilities:

Protect from freezing. Keep container tightly closed. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Do not store near incompatible materials (see Section 10). Store away from reducing agents.

SECTION 8: Exposure controls/personal protection



Control parameters:

7664-93-9, Sulfuric Acid., OSHA PEL: 1mg/m³.
7664-93-9, Sulfuric Acid., ACGIH TLV: 0.2 mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. Ensure eye wash and safety showers are available.

Respiratory protection:

Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable. Use under a fume hood. Respirator with acid gas cartridges.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Wear protective equipment to prevent contact with skin, eyes, or hair.

Eye protection:

Safety glasses with side shields or goggles. Face shield.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	<3	Relative density:	1.04 - 1.06
Melting/Freezing point:	Below 0	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Approx 100C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined

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Density at 20°C:	Not determined
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SECTION 10: Stability and reactivity

Reactivity:

Reacts violently with water with evolution of heat. Corrosive to metals.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

Reacts violently or explosively with incompatibles. Reacts with most metals to produce hydrogen gas, which may form explosive mixtures with air.

Conditions to avoid:

Store away from incompatible substances. excess heat.

Incompatible materials:

Organics. Metals. Strong acids. Strong bases. Alcohols. Chlorine. halogenated compounds. Combustible materials. Chlorates. Alkalines. Carbides. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents.

Hazardous decomposition products:

Oxides of sulfur. Carcinogenic mists/aerosols. Oxygen.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Rabbit - Extremely corrosive and destructive to tissue. 7664-93-9.

Serious eye damage/irritation:

Rabbit - Corrosive to eyes. 7664-93-9.

Respiratory or skin sensitization: No additional information.

Carcinogenicity:

Strong inorganic acid mists containing sulfuric acid.: IARC Group 1

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

7664-93-9, EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h.

7664-93-9, LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h.

Persistence and degradability:

Not applicable for test method.

Bioaccumulative potential:

Not expected to bio accumulate.

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Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects:

Concentrated sulfuric acid has moderate acute and chronic toxicity to aquatic life, which is driven by the pH of the aquatic environment, as a result of the presence of the acid. Small quantities will be neutralized by natural alkalinity.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

2796

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Sulfuric Acid Solution.

Hazard Class: 8

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Sulfuric Acid Solution.

Hazard Class: 8

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

7664-93-9 Sulfuric acid.

RCRA (hazardous waste code):

None of the ingredients are listed.

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TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7664-93-9 sulfuric acid 1000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

7664-93-9 sulfuric acid.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-0

HMIS: 3-0-2

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.

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CAS Chemical Abstracts Service (division of the American Chemical Society).

NFPA National Fire Protection Association (USA).

HMS Hazardous Materials Identification System (USA).

WHMIS Workplace Hazardous Materials Information System (Canada).

DNEL Derived No-Effect Level (REACH).