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1 Identification
· Product identifier
 Trade name: <u>Acetic Acid, 10% v/v</u> Product code: NC0424535
 Recommended use and restriction on use Recommended use: Laboratory chemicals Restrictions on use: No relevant information available.
 Details of the supplier of the Safety Data Sheet Manufacturer/Supplier: AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 Phone: (717)632-1291 Toll-Free: (866)632-1291 info@aquaphoenixsci.com Distributor: Fisher Science Education 6771 Silver Crest Road Nazareth, PA 18064 (800) 955-1177
 Emergency telephone number: ChemTel Inc. (800)255-3924 (North America) +1 (813)248-0585 (International)
2 Hazard(s) identification
[·] Classification of the substance or mixture
Met. Corr.1 H290 May be corrosive to metals. Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements

The product is not classified as hazardous according to OSHA GHS regulations within the United States. • GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms:

None.



- **Signal word:** None Warning
- · Hazard statements:
- H290 May be corrosive to metals. H315 Causes skin irritation.

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H319 Causes s	erious eye irritation.	
 Precautionary 	statements:	
None.		
P234	Keep only in original container.	
P264	Wash thoroughly after handling.	
P280	Wear protective gloves/protective clothing/eye protection.	
P302+P352	If on skin: Wash with plenty of water.	
P305+P351+P3	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if	
	present and easy to do. Continue rinsing.	
P332+P313	If skin irritation occurs: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P390	Absorb spillage to prevent material damage.	
P406	Store in corrosive resistant container with a resistant inner liner.	
· Other hazards There are no other hazards not otherwise classified that have been identified.		

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:

7732-18-5	Water		90%
64-19-7		 Flam. Liq. 3, H226 Met. Corr.1, H290; Skin Corr. 1A, H314 Acute Tox. 4, H332 	10%
A d diti a m a l	information.		

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

[•] Description of first aid measures

- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Rinse with warm water.

If skin irritation continues, consult a doctor.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

• Most important symptoms and effects, both acute and delayed: Nausea in case of ingestion.

Gastric or intestinal disorders when ingested. Acidosis

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Irritating to eyes and skin.

- **Danger:** No relevant information available.
- Indication of any immediate medical attention and special treatment needed: Medical supervision for at least 48 hours.

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

5 Fire-fighting measures

· Extinguishing media

- · Suitable extinguishing agents:
- The product is not flammable.
- Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents: None.
- Special hazards arising from the substance or mixture
 Formation of toxic gases is possible during heating or in case of
- Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
- **Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

6 Accidental release measures

• Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

- · Environmental precautions Do not allow to enter sewers/ surface or ground water.
- [.] Methods and material for containment and cleaning up

Use limestone to neutralize and/or absorb spill.

Send for recovery or disposal in suitable receptacles.

Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage

[.] Handling

- · Precautions for safe handling:
- Avoid splashes or spray in enclosed areas.
- Prevent formation of aerosols.
- Use only in well ventilated areas.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and receptacles: Store in a cool location.

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Store only in the original receptacle. Unsuitable material for receptacle: aluminium. Unsuitable material for receptacle: steel.

• Information about storage in one common storage facility: Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from metals.

Store away from oxidizing agents.

• Further information about storage conditions: Keep containers tightly sealed.

• Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

Control parameters

 Components with limit values that require monitoring at the workplace: 			
64-19-7 Acetic acid			
PEL (USA)	Long-term value: 25 mg/m ³ , 10 ppm		
REL (USA)	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm		
TLV (USA)	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm		
EL (Canada)	Short-term value: 15 ppm Long-term value: 10 ppm		
EV (Canada)	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm		
LMPE (Mexico)	Short-term value: 15 ppm Long-term value: 10 ppm		

Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Avoid breathing mist, vapors, or spray.

• Engineering controls: Provide adequate ventilation.

- Breathing equipment: Use suitable respiratory protective device when high concentrations are present.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves Nitrile rubber, NBR Butyl rubber, BR Neoprene gloves

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Natural rubber, NR Fluorocarbon rubber (Viton)

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- · Body protection: Acid resistant protective clothing.
- · Limitation and supervision of exposure into the environment No special requirements.
- · Risk management measures No special requirements.

9 Physical and chemical properties			
· Information on basic physical and chemical properties			
· Appearance:			
Form:	Liquid		
Color:	Colorless		
· Odor: · Odor threshold:	Characteristic		
· Odor threshold:	Not determined.		
· pH-value:	Not determined.		
 Melting point/Melting range: 	Not determined.		
 Boiling point/Boiling range: 	>100 °C (>212 °F)		
· Flash point:	The product is not flammable.		
· Flammability (solid, gaseous):	Not applicable.		
· Auto-ignition temperature:	Not determined.		
· Decomposition temperature:	Not determined.		
· Danger of explosion:	Product does not present an explosion hazard.		
· Explosion limits			
Lower:	Not determined.		
Upper:	Not determined.		
 Oxidizing properties: 	Not determined.		
· Vapor pressure:	Not determined.		
· Density:			
Relative density:	1		
Vapor density:	Not determined.		
Evaporation rate:	Not determined.		
· Solubility in / Miscibility with			
Water:	Fully miscible.		
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· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Kinematic: Other information Not determined. Not determined. No relevant information available.

10 Stability and reactivity

- · Reactivity: No relevant information available.
- · Chemical stability: Stable under normal temperatures and pressures.
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used and stored according to specifications.
- [•] Possibility of hazardous reactions
- Reacts with alkali (lyes).
- Reacts with certain metals.

Reacts with strong oxidizing agents.

Toxic fumes may be released if heated above the decomposition point.

Conditions to avoid No relevant information available.

- [·] Incompatible materials
- Alkalis
- Metals.

Strong oxidizers such as perchlorates, bromates, and nitrates; hydrofluoric acid.

· Hazardous decomposition products Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects

- Acute toxicity: Based on available data, the classification criteria are not met.
- · LD/LC50 values that are relevant for classification: None.
- · Primary irritant effect:
- · On the skin: Irritant to skin and mucous membranes.
- · On the eye: Causes serious eye irritation.
- · Sensitization: Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact. Skin contact.

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- Acute effects (acute toxicity, irritation and corrosivity): Irritating to eyes and skin.
- Repeated dose toxicity: No relevant information available.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

- · Aquatic toxicity No relevant information available.
- **Persistence and degradability** No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- · Mobility in soil: No relevant information available.
- Additional ecological information
- · General notes:

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, the aqueous waste, emptied into drains, is only low water-dangerous.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No relevant information available.

13 Disposal considerations

[.] Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- [·] Uncleaned packagings
- · Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- · DOT, ADR/RID/ADN, IMDG, IATA

UN2790

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UN proper shipping name	
DOT	Acetic acid solution
· ADR/RID/ADN, IMDG, IATA	ACETIC ACID SOLUTION
[·] Transport hazard class(es)	
· DOT	
en e	
· Class	8
· Label	8
· ADR/RID/ADN	
Class	8 (C3)
· Label	8
· IMDG, IATA	
· Class	8
· Label	8
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	III
· Environmental hazards · Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
[.] Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture

· United States (USA)

· SARA

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· Section 302 (extremely hazardous substances):	
None of the ingredients are listed.	
· Section 355 (extremely hazardous substances):	
None of the ingredients are listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients are listed.	
· TSCA (Toxic Substances Control Act)	
All ingredients are listed.	
· Proposition 65 (California)	
· Chemicals known to cause cancer:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity for females:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity for males:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients are listed.	
· EPA (Environmental Protection Agency):	
None of the ingredients are listed.	
· IARC (International Agency for Research on Cancer):	
None of the ingredients are listed.	
· Canadian Domestic Substances List (DSL) (Substances not listed.):	
All ingredients are listed.	

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistant, Bio-accumulable, Toxic vPvB: very Persistent and very Bioaccumulative OSHA: Occupational Safety & Health Administration Flam. Liq. 3: Flammable liquids - Category 3 Met. Corr.1: Corrosive to metals - Category 1 Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A · Sources

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Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
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