

EMS CATALOG NO: 11480
EMS PRODUCT: ACETATE BUFFER
DATE: 06/15/2006
PAGE NUMBER: One of 5

MATERIAL SAFETY DATA SHEET

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Section 1: Chemical Product and Company Identification

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Section 2. Composition/Information on Ingredients

Component	CAS Registry#	Percent Concentration	ACGIH TLV	OSHA PEL
Sodium Acetate Trihydrate	6131-90-4	24 -- 42	Not Available	Not Available
Acetic Acid	64-19-7	45 - 50	10 ppm 25 mg/m ³	10 ppm 25 mg/m ³
Water, Deionized	7732-18-5	Balance	Not Available	Not Available

Section 3 : Hazard Identification

Emergency Overview: Danger! Corrosive liquid. May be fatal if swallowed. Causes severe burns to all areas of contact. Harmful if inhaled. Inhalation may cause lung and tooth damage. Immediately

wash areas of contact with plenty of water for at least 15 minutes. If ingested, give large quantity of water. Do not induce vomiting.

Target Organs: eyes, skin, respiratory system, teeth.

Eye Contact: Eye contact may cause severe eye damage followed by loss of sight. Vapor exposure may cause watering and irritation to eyes.

Inhalation: Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat and lungs.

Skin Contact: May cause serious damage to the skin. Effects may include redness, pain, skin burns.

Ingestion: Swallowing can cause severe injury leading to death. Symptoms include sore throat, vomiting and death.

Chronic Effects/Carcinogenicity: Repeated exposures may cause erosion of exposed front teeth, darkening of skin and chronic inflammation of the nose, throat and bronchial tubes.

IARC - No.

NTP - No.

OSHA - No.

Teratology (Birth Defect) Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Acetic Acid.

Reproductive Information: No information found.

Section 4. First Aid Measures

Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Get medical attention immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Skin Contact: Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: Do not induce vomiting. Give large quantity of water. Call a physician immediately.

Section 5. Fire Fighting Measures

Flash Point: 109°F (Acetic Acid)

Method Used: CC

LFL: 5.4% (Acetic Acid)

UFL: 16.0% (Acetic Acid)

Extinguishing Media: Use water spray, dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Water spray can be used to dilute spills to non-flammable mixtures.

Fire & Explosion Hazards: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with strong oxidizers may cause fire. Vapors can flow along surfaces to distant ignition source and flash back. Reacts with most metals to produce hydrogen gas, which can form explosive mixture with air.

Fire Fighting Instructions: Use normal procedures/instructions.

Fire Fighting Equipment: Use protective clothing and breathing equipment appropriate for the surrounding fire.

Section 6. Accidental Release Measures

Absorb with suitable material (paper towels, etc.) and dispose of in accordance with local regulations. Ventilate, if necessary, site of spillage well to evaporate remaining liquid and disperse vapor.

Section 7. Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

SAFETY STORAGE CODE: Corrosive

Section 8. Exposure Control/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Respiratory Protection: Work with adequate ventilation or wear respirator with acid gas/organic vapor cartridge.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

Section 9. Physical and Chemical Properties

Appearance: Clear, colorless liquid

pH: 4 - 5

Odor: strong vinegar

Boiling Point(°C):approximately 100 - 118

Solubility in Water: Infinite

Melting Point(°C):approximately 0 - 16.6

Specific Gravity: approximately 1.1 - 1.2

Vapor Pressure: Not Applicable.

Section 10. Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage. Acetic acid contracts slightly upon freezing which may cause the container to burst.

Incompatibility: Strong bases, strong oxidizers, chromic acid, sodium peroxide, nitric acid, perchloric acid.

Hazardous Decomposition Products: When heated to decomposition it emits irritating fumes.

Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

LD50, Oral, Rat (Acetic Acid): 3310 mg/kg, details of toxic effects not reported other than lethal dose value; LD50, Dermal, Rabbit (Acetic Acid): 1.06 g/kg; LC50, Inhalation, Mouse (Acetic Acid): 5620 ppm/1 hr.; LD50, Oral, Rat (Sodium Acetate): 3530 mg/kg; Information obtained from RTECS ("Registry of Toxic Effects of Chemical Substances").

Section 12. Ecological Information

Ecotoxicological Information: Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aqueous systems, low potential to affect aquatic organisms and a low potential to affect the growth of some plant seedlings.

Chemical Fate Information: Acetic Acid has low potential to bioconcentrate. If released to water or soil, Acetic Acid will biodegrade readily.

Section 13. Disposal Considerations

Neutralize with 5% Sodium Hydroxide or Sodium Carbonate solutions, then pour into the drain while flushing with water, if allowed. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

D.O.T. Shipping Name: Acetic Acid Solution

D.O.T. Hazard Class: 8

U.N. / N.A. Number: UN2790

Packing Group: III

D.O.T. Label : Corrosive(8)



Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

OSHA Status: These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA Status: All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

CERCLA Reportable Quantity: Acetic Acid - 5,000 pounds.

Sara Title III:

Section 302 Extremely Hazardous Substances:

Section 311/312 Hazardous Categories: Acute, Chronic, Fire, Reactivity: Yes Pressure: No

Section 313 Toxic Chemicals: No.

RCRA Status: No.

California: None reported.

Florida: Acetic Acid is listed on Florida' s Toxic Substances List.

Pennsylvania: Acetic Acid is listed as an Environmental Hazard on the state' s Hazardous Substances List.

WHMIS Information (Canada):

E: Corrosive Material.



Section 16. Other Information

NFPA Ratings:	Health: 2	Flammability: 0	Reactivity: 0	Special Notice Key: None
HMS Ratings:	Health: 2	Flammability: 0	Reactivity: 0	Protective Equipment: B (Protective Eyewear, Gloves)