Material Safety Data Sheet

ACETIC ACID 60%

1. Product and Company Identification

Material name	**ACETIC ACID 60%**
Patent Number	Not available
Revision date	April-05-2011
Version No.	3
CAS #	Mixture
Product use	Organic Acid
Manufacturer information	Clearwater™ International L.L.C. 4420 South Flores Road Elmendorf, TX 78112 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Producers Service Corp. 109 South Graham St. Zanesville, OH 43701 US
Supplier emergency telephone number(s)	24hr customer Service 740-454-6253

2. Hazards Identification

Emergency overview	Causes skin and eye burns. Vapors may be irritating to eyes, nose, throat, and lungs.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Eye contact. Ingestion.
Eyes	This product causes eye burns. Risk of serious damage to eyes. Do not get this material in contact with eyes.
Skin	Causes skin burns. Harmful in contact with skin. Do not get this material in contact with skin.
Inhalation	Toxic by inhalation. Causes burns. Prolonged inhalation may be harmful. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. May cause delayed lung damage. Do not ingest. Components of the product may be absorbed into the body by ingestion.
Target organs	Eyes. Lungs. Respiratory system. Skin.
Chronic effects	Shortness of breath. May cause delayed lung damage.
Signs and symptoms	Discomfort in the chest. Shortness of breath. Cough.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Acetic Acid	64-19-7	65 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Skin contact Wash off with soap and water. Get medical attention if irritation develops or persists.

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice.

Notes to physician In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

General advice In case of shortness of breath, give oxygen. Keep victim warm. Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties Flammable by OSHA criteria. Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media

Suitable extinguishing media Water. Alcohol foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Do not handle or store near an open flame, heat or other sources of ignition. All equipment used when handling the product must be grounded. Do not breathe vapors or spray mist. Use only with adequate ventilation. Wash thoroughly after handling. Avoid prolonged exposure.

Storage

Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Acetic Acid	64-19-7	10 ppm	15 ppm	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Acetic Acid	64-19-7	10 ppm	Not established	Not established

Engineering controls

Provide adequate ventilation.

Personal protective equipment

Eye / face protection

Do not get this material in contact with eyes. Wear chemical goggles. Face-shield.

Skin protection	Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear appropriate chemical resistant gloves. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).Impervious gloves. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygeine considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with clothing.

9. Physical & Chemical Properties

Appearance	Liquid.
Color	clear, Colorless
Odor	of vinegar
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	0 - 2
Melting point	50 °F (9.98 °C) estimated
Freezing point	Not available
Boiling point	231.8 °F (111 °C) estimated
Flash point	115 °F (46.1 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.05 - 1.08
Relative density	1.0649 g/cm3 estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	532.4 °F (278 °C) estimated
Decomposition temperature	Not available
VOC	60 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.

Conditions to avoid Heat, flames and sparks. Reacts violently with alkaline material. This product may react with reducing agents. Do not mix with other chemicals.

Incompatible materials Peroxides. Strong oxidizing agents. Acids. Caustics. Incompatible with bases. This product may react with reducing agents

Hazardous decomposition products Irritants. Toxic gas. May include oxides of nitrogen. May include oxides of phosphorus.

Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects Acute LD50: 5517 mg/kg estimated, Rat, Oral
Acute LD50: 1767 mg/kg estimated, Rat, Dermal
Acute LC50: 5 mg/l/4h estimated, Rat, Inhalation
Causes burns.

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Acetic Acid	64-19-7	Inhalation LC50 Rat: 11.4 mg/L/1H; Oral LD50 Rat:3310 mg/kg; Dermal LD50 Rabbit:1060 mg/kg

Chronic effects Hazardous by OSHA criteria. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

Carcinogenicity Not expected to be hazardous by OSHA criteria.

Neurological effects Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity LC50 147 mg/L estimated, Fish, 96.00 Hours,
Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Ecotoxicity - Freshwater Fish Species Data

Acetic Acid	64-19-7	96 Hr LC50 Pimephales promelas: 88 mg/L [static]; 96 Hr LC50 Lepomis macrochirus 75 mg/L

Ecotoxicity - Microtox Data

Acetic Acid	64-19-7	5 min EC50 Photobacterium phosphoreum: 8.8 mg/L; 15 min EC50 Photobacterium phosphoreum: 8.8 mg/L; 25 min EC50 Photobacterium phosphoreum: 8.8 mg/L

Ecotoxicity - Water Flea Data

Acetic Acid	64-19-7	24 Hr EC50 Daphnia magna: 95 mg/L

Environmental effects Harmful to aquatic life.

Ecotoxicity - Freshwater Fish Species Data

Acetic Acid	64-19-7	96 Hr LC50 Pimephales promelas: 88 mg/L [static]; 96 Hr LC50 Lepomis macrochirus 75 mg/L

Ecotoxicity - Microtox Data

Acetic Acid	64-19-7	5 min EC50 Photobacterium phosphoreum: 8.8 mg/L; 15 min EC50 Photobacterium phosphoreum: 8.8 mg/L; 25 min EC50 Photobacterium phosphoreum: 8.8 mg/L

Ecotoxicity - Water Flea Data

Acetic Acid	64-19-7	24 Hr EC50 Daphnia magna: 95 mg/L

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F
D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]

Disposal instructions Dispose of this material and its container at hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Acetic Acid Solution
Hazard class	8
UN number	UN2790
Packing group	III
Additional information:	
Special provisions	A6, B10, T14, TP2, TP27
Packaging non bulk	201
Packaging bulk	243
ERG number	153

Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Acetic Acid Solution
Hazard class	8
UN number	UN2790
Packing group	III
Additional information:	
Special provisions	A6, B10, T14, TP2, TP27
Packaging non bulk	201
Packaging bulk	243
ERG number	153

Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	Acetic Acid Solution
Hazard class	3
UN number	UN2790
Packing group	III
Additional information:	
Special provisions	16
ERG number	153

IMDG

Basic shipping requirements:

Proper shipping name	Acetic Acid Solution
Hazard class	8
UN number	2790
Packing group	III

IATA

Basic shipping requirements:

Proper shipping name	Acetic Acid Solution
Hazard class	8
UN number	2790
Packing group	III

15. Regulatory Information

Labelling

Contains	Acetic Acid
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

FEMA (Flavor and Extract Manufacturers Association) - FEMA Numbers

Acetic Acid	64-19-7	2006

U.S. - FDA - Food Additives Generally Recognized as Safe (GRAS)

Acetic Acid	64-19-7	21 CFR 184.1005

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

CERCLA (Superfund) reportable quantity

Acetic Acid: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

Acetic Acid	64-19-7	1 %

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - Massachusetts - Right To Know List

Acetic Acid	64-19-7	Present

U.S. - Minnesota - Hazardous Substance List

Acetic Acid	64-19-7	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Acetic Acid	64-19-7	sn 0004

U.S. - Pennsylvania - RTK (Right to Know) List

Acetic Acid	64-19-7	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Acetic Acid	64-19-7	Toxic; Flammable

U.S. - Texas - Effects Screening Levels - Long Term

Acetic Acid	64-19-7	10 ppb ESL; 25 µg/m3 ESL

U.S. - Texas - Effects Screening Levels - Short Term

Acetic Acid	64-19-7	100 ppb ESL; 250 µg/m3 ESL

16. Other Information

HMIS® ratings

Health: 3*
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 3
Flammability: 2
Instability: 0

Prepared by

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