



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** ACETIC ACID, VERITAS® REDISTILLED  
**Catalog #** 546  
**Version #** 02  
**Revision date** 27-May-2009  
**CAS #** 64-19-7  
**Synonym(s)** GLACIAL ACETIC ACID \* ETHANOIC ACID  
**Manufacturer information** GFS Chemicals, Inc.  
P.O. Box 245  
Powell, OH 43065 US  
www.gfschemicals.com  
Fax 740-881-5989  
Phone 740-881-5501  
Toll Free 800-858-9682  
Emergency Assistance Chemtrec 800-424-8300

## 2. Hazards Identification

**Emergency overview** DANGER  
  
FLAMMABLE LIQUID AND VAPOR.  
  
Corrosive. Causes skin and eye burns. May be harmful if absorbed through skin. Irritating to respiratory system. Prolonged exposure may cause chronic effects. Avoid prolonged contact with eyes, skin and clothing.  
  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.  
**Eyes** 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** Causes burns. Irritating to respiratory system. Avoid breathing vapors or mists of this product.  
**Ingestion** Components of the product may be absorbed into the body by ingestion. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Do not ingest.  
**Target organs** Eyes. Respiratory system. Skin.  
**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	90 - 100

## 4. First Aid Measures

**First aid procedures**  
**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.  
**Skin contact** Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.

**Ingestion** Have victim rinse mouth thoroughly with water. Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If material is ingested, immediately contact a poison control center.

**Notes to physician** In case of shortness of breath, give oxygen. Keep victim warm.

**General advice** Immediate medical attention is required. In case of shortness of breath, give oxygen. Keep victim warm. 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. Heat may cause the containers to explode. Runoff to sewer may cause fire or explosion hazard.

### Extinguishing media

**Suitable extinguishing media** Water. Water spray. Foam. Dry powder. Carbon dioxide (CO<sub>2</sub>).

**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 case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. 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 device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods** In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

## 6. Accidental Release Measures

**Personal precautions** Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering them. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**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 spill for later disposal. Neutralize with sodium hydroxide, soda ash or lime.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Neutralize the spilled material before disposal. Following product recovery, flush area with water.

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. Do not smoke. All equipment used when handling the product must be grounded. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get this material on clothing. Use only in area provided with appropriate exhaust ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Avoid release to the environment.

### Storage

The pressure in sealed containers can increase under the influence of heat. Keep away from heat, sparks and open flame. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a well-ventilated place. Keep container tightly closed. Keep this material away from food, drink and animal feed. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### ACGIH

Material	CAS #	Type	Value	Form
ACETIC ACID	64-19-7	STEL	15 ppm	
		TWA	10 ppm	

#### U.S. - OSHA

Material	CAS #	Type	Value	Form
ACETIC ACID	64-19-7	PEL	25 mg/m <sup>3</sup>	
			10 ppm	
		TWA	25 mg/m <sup>3</sup>	
			10 ppm	

### Engineering controls

Ensure adequate ventilation, especially in confined areas.

### Personal protective equipment

#### Respiratory protection

Use a chemical cartridge respirator for concentrations exceeding the Occupational Exposure Limit. Avoid breathing dust/fume/gas/mist/vapors/spray.

#### Hand protection

Wear protective gloves.

#### 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. Wear appropriate chemical resistant clothing. It may provide little or no thermal protection. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Wear appropriate chemical resistant gloves.

#### General hygiene 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, drink or smoke. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

#### General

Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

## 9. Physical & Chemical Properties

### Appearance

Clear. Liquid. Freezes readily when cool (<62 F).

### Color

Colorless.

### Odor

strong vinegar-like.

### Odor threshold

Not available.

### Physical state

Liquid.

### Form

Liquid.

### pH

2.4 (1 M solution)

### Melting point

62.6 °F (16.6 °C) estimated

<b>Freezing point</b>	62.6 °F (16.6 °C)
<b>Boiling point</b>	244.4 °F (118 °C) 101.9898 kPa
<b>Flash point</b>	103 °F (39.4 °C) estimated Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	16 %
<b>Flammability limits in air, lower, % by volume</b>	4 %
<b>Vapor pressure</b>	2.0931 kPa at 25°C
<b>Vapor density</b>	2.1
<b>Specific gravity</b>	1.05
<b>Relative density</b>	1.05 g/cm <sup>3</sup>
<b>Solubility (water)</b>	Miscible
<b>Partition coefficient (n-octanol/water)</b>	-0.17
<b>Auto-ignition temperature</b>	798.8 °F (426 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>VOC</b>	100 % estimated
<b>Percent volatile</b>	100 % estimated
<b>Molecular weight</b>	60.0500 g/mol
<b>Molecular formula</b>	C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable at normal conditions. Risk of ignition.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	Strong oxidizing agents. Peroxides. Caustics.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

<b>Acute effects</b>	Causes burns.	
<b>Acute Dermal: LD 50</b>		
ACETIC ACID	64-19-7	Rabbit 1060 mg/kg
<b>Acute Inhalation: LC 50</b>		
ACETIC ACID	64-19-7	Mouse 5000 mg/l 1 h
ACETIC ACID	64-19-7	Guinea pig 5000 mg/l 1 h
<b>Acute Oral: LD 50</b>		
ACETIC ACID	64-19-7	Rat 3530 mg/kg
<b>Acute Toxicity other routes: LD 50</b>		
ACETIC ACID	64-19-7	Rabbit 1200 mg/kg Subcutaneous
ACETIC ACID	64-19-7	Mouse 525 mg/kg Intravenous

### Toxicology data for the preparation

Acute LD50: 1060 mg/kg, Rabbit, Dermal  
 Acute LD50: 525 mg/kg, Mouse, Other  
 Acute LD50: 1200 mg/kg, Rabbit, Other  
 Acute LC50: 5000 mg/l, Guinea pig, Inhalation  
 Acute LC50: 5000 mg/l, Mouse, Inhalation  
 Acute LD50: 3530 mg/kg, Rat, Oral

<b>Local effects</b>	Irritating to respiratory system.
<b>Chronic effects</b>	Hazardous by OSHA criteria. Prolonged exposure may cause chronic effects.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Corrosivity</b>	Hazardous by OSHA criteria.

## 12. Ecological Information

<b>Ecotoxicity</b>	Components of this product are hazardous to aquatic life.	
<b>Invertebrate Toxicity: EC 50</b>		
ACETIC ACID	64-19-7	liver elimia, river snail (Elimia livescens) 640 mg/l 24 h Static Intoxication
ACETIC ACID	64-19-7	Pond snail (Lymnaea emarginata angulata) 320 mg/l 48 h Static Intoxication
ACETIC ACID	64-19-7	Pond snail (Lymnaea emarginata angulata) 390 mg/l 24 h Static Intoxication
ACETIC ACID	64-19-7	Water flea (Daphnia magna) 65 mg/l 48 h Static Intoxication
ACETIC ACID	64-19-7	Water flea (Daphnia magna) 71 mg/l 24 h Static Intoxication
ACETIC ACID	64-19-7	liver elimia, river snail (Elimia livescens) 460 mg/l 48 h Static Intoxication
<b>Environmental effects</b>	Harmful to aquatic life.	
<b>Persistence and degradability</b>	Not available.	
<b>Partition coefficient</b>	-0.17	

## 13. Disposal Considerations

<b>Waste codes</b>	D001: Waste Flammable material with a flash point <140 F D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
<b>Disposal instructions</b>	Dispose of this material and its container at hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Solutions with low pH-value must be neutralized before discharge. Dispose in accordance with all applicable regulations.

## 14. Transport Information

### DOT

#### Basic shipping requirements:

<b>Proper shipping name</b>	Flammable liquids, n.o.s.
<b>Hazard class</b>	3
<b>UN number</b>	UN1993
<b>Packing group</b>	III
<b>Additional information:</b>	
<b>Special provisions</b>	B1, B52, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	242
<b>Reportable quantity</b>	5000
<b>ERG number</b>	128



## 15. Regulatory Information

<b>US federal regulations</b>	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.  CERCLA/SARA Hazardous Substances - Not applicable.
-------------------------------	---

#### CERCLA (Superfund) reportable quantity

ACETIC ACID, VERITAS® REDISTILLED: 5000.0000

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	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

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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)

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

#### **US - Pennsylvania RTK - Hazardous Substances: Listed substance**

ACETIC ACID 64-19-7 Listed.

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 3\*  
Flammability: 2  
Physical hazard: 0

**NFPA ratings** Health: 3  
Flammability: 2  
Instability: 0

**Disclaimer** The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Issue date** 27-May-2009

**This data sheet contains changes from the previous version in section(s):** This document has undergone significant changes and should be reviewed in its entirety.