Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **ACETIC ACID**

Synonyms: Glacial Acetic Acid; Ethanoic Acid; Ethylic Acid
CAS No: 64-19-7
Molecular Formula: $CH_3COOH$ or $C_2H_4O_2$
RTK Substance No: 0004
Description: Colorless liquid with vinegar odor

## HAZARD DATA

| Hazard Rating | Firefighting | Reactivity |
|---|---|---|
| **3 - Health**<br>**2 - Fire**<br>**0 - Reactivity**<br>**DOT#:** UN 2789<br>**ERG Guide #:** 132<br>**Hazard Class:** 8 (Corrosive) | Use dry chemical, $CO_2$, water spray, alcohol-resistant foam or other foaming agent.<br>POISONOUS GASES ARE PRODUCED IN FIRE.<br>CONTAINERS MAY EXPLODE IN FIRE.<br>Use water spray to cool containers and disperse vapors.<br>Vapor is heavier than air and may explode if ignited in an enclosed space. | Reacts violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE) and STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE).<br>**Acetic Acid** attacks many METALS forming flammable and explosive *Hydrogen gas*.<br>Incompatible with CHROMIC ACID; SODIUM PEROXIDE; NITRIC ACID; ACETONE; and AMMONIUM NITRATE. |

## SPILL/LEAKS

**Isolation Distance:** 50 to 100 meters (160 to 330 feet)

Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.
Use water spray to disperse vapors.
Soda Ash (Sodium Carbonate) can be used to neutralize spills.
This substance is harmful to aquatic organisms.

## PHYSICAL PROPERTIES

| | |
|---|---|
| **Odor Threshold:** | 0.48 to 1.0 ppm |
| **Flash Point:** | 103°F (39°C) |
| **LEL:** | 4% |
| **UEL:** | 19.99% |
| **Vapor Density:** | 2.1 (air = 1) |
| **Vapor Pressure:** | 15 mm Hg at 77°F (25°C) |
| **Water Solubility:** | Soluble |
| **Boiling Point:** | 244°F (118°C) |
| **Ionization Potential:** | 10.66 eV |

## EXPOSURE LIMITS

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|---|---|
| **OSHA:** | 10 ppm 8-hr TWA |
| **NIOSH:** | 10 ppm 10-hr TWA, 15 ppm STEL |
| **ACGIH:** | 10 ppm 10-hr TWA, 15 ppm STEL |
| **IDLH:** | 50 ppm |
| **ERPG-1:** | 5 ppm |
| **ERPG-2:** | 35 ppm |
| **ERPG-3:** | 250 ppm |

## PROTECTIVE EQUIPMENT

| | |
|---|---|
| **Gloves:** | Neoprene, Butyl Rubber |
| **Coverall:** | DuPont Tychem® CPF4, Responder®, TK, Reflector®; CHEMFAB Challenger® 4000. |
| **Boot:** | Neoprene or Butyl |
| **Respirator:** | >10 ppm - air purifying respirator with organic vapor cartridges, >100 ppm - supplied air |

## HEALTH EFFECTS

| | |
|---|---|
| **Eyes:** | Irritation, burns, possible eye damage |
| **Skin:** | Irritation, burns |
| **Acute:** | Nose, throat and lung irritation, pulmonary edema, coughing, shortness of breath |
| **Chronic:** | Bronchitis, thickening and cracking of the skin |

## FIRST AID AND DECONTAMINATION

**Remove** the person from exposure.
**Flush** eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Immediate medical attention is necessary.
**Remove** contaminated clothing and wash contaminated skin with soap and water.
**Begin** artificial respiration if breathing has stopped and CPR if necessary.
**Medical** observation is recommended for 24 to 48 hours as symptoms may be delayed.