



Material Safety Data Sheet

Acetic Acid Solutions, 0.1% - 56% V/V

Section 1 - Chemical Product and Company Identification

MSDS Name:

Acetic Acid Solutions, 0.1% - 56%V/V

Catalog Numbers:LC10120, LC10150, LC10160, LC10180, LC10190, LC10210, LC10240, LC10260, LC10280,
LC10290, LC10310, LC10350, LC10360, LC10380, LC10390, LC10400**Synonyms:**

None

Company Identification:LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238**Company Phone Number:**

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
64-19-7	Acetic acid	0.1 - 56

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, colorless solution**Caution!** Causes eye and skin irritation or burns. Causes gastrointestinal and respiratory tract irritation or burns. May be harmful if absorbed through the skin.**Target Organs:** Eyes, skin, mucous membranes, teeth

Potential Health Effects

Eye:

Causes eye irritation or burns. Higher concentrations may cause irreversible eye damage.

Skin:

Causes skin irritation or burns. May be harmful if absorbed through the skin. Higher concentrations may cause blackening and hyperkeratosis of the skin of the hands.

Ingestion:

May cause irritation or burns to the digestive tract. May cause pain, nausea, vomiting, diarrhea, and shock. May cause diminished or suppressed urination.



Material Safety Data Sheet

Acetic Acid Solutions, 0.1% - 56% V/V

Inhalation:

Causes irritation or burns to the respiratory tract. May lead to bronchitis, pharyngitis, and dental erosion. May be absorbed through the lungs.

Chronic:

Chronic exposure to acetic acid may cause erosion of dental enamel, bronchitis, eye irritation, darkening of the skin, and chronic inflammation of the respiratory tract. Acetic acid can cause occupational asthma. One case of a delayed asthmatic response to glacial acetic acid has been reported in a person with bronchial asthma. Skin sensitization to acetic acid is rare, but has occurred.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once. Do NOT allow victim to rub or keep eyes closed.

Skin:

Get medical aid at once. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. If victim is conscious, give 2-4 cupfuls of water or milk to dilute acid. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Persons with preexisting skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Reacts with most metals to form highly flammable hydrogen gas, which can form explosive mixtures with air. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not available

Flash Point:

Not available.

NFPA Rating:

CAS# 7732-18-5: Health- 0, Flammability- 0, Instability- 0.

CAS# 64-19-7: Health- 3, Flammability- 2, Instability- 0.

Explosion Limits:

Lower: 4.0% Upper: 19.9%



Material Safety Data Sheet Acetic Acid Solutions, 0.1% - 56% V/V

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), and then place in suitable container labeled for disposal. Wash area with soap and water. Provide ventilation. Control runoff and isolate discharged material for proper disposal. Spill may be carefully neutralized with soda ash (sodium carbonate).

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Do not breathe vapor or mist. Use corrosion-resistant transfer equipment when dispensing.

Storage:

Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances. Acetic acid should be kept above its freezing point of 62°F (17°C) to allow it to be handled as a liquid. It will contract slightly on freezing. Freezing and thawing does not affect product quality.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	none listed	none listed	none listed
Acetic acid	10 ppm TWA; 15 ppm STEL	10 ppm TWA; 25 mg/m ³ TWA 50 ppm IDLH	10 ppm TWA; 25 mg/m ³ TWA

OSHA Vacated PELs:

Acetic acid: 10 ppm TWA; 25 mg/m³ TWA

Personal Protective Equipment**Eyes:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.



Material Safety Data Sheet

Acetic Acid Solutions, 0.1% - 56% V/V

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Clear, colorless
Odor:	Vinegar odor
pH:	Acidic
Vapor Pressure:	Not available
Vapor Density:	2.10 (Air = 1)
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	Not available
Freezing/Melting Point:	Not available
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	1.0-1.05
Molecular Formula:	Not available
Molecular Weight:	Not available

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Excess heat, freezing temperatures, confined spaces.

Incompatibilities with Other Materials:

Metals, strong oxidizing agents, bases, chlorine trifluoride, nitric acid, acetaldehyde, chlorosulfonic acid, oleum, bromine pentafluoride, perchloric acid, potassium tert-butoxide, ethyleneimine, 2-aminoethanol, ethylene diamine, phosphorus trichloride, phosphorus isocyanate, chromic acid.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 64-19-7: AF1225000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 64-19-7:

Draize test, rabbit, skin: 50 mg/24H Mild;

Inhalation, mouse: LC50 = 5620 ppm/1H;



Material Safety Data Sheet

Acetic Acid Solutions, 0.1% - 56% V/V

Oral, rat: LD50 = 3310 mg/kg;
Skin, rabbit: LD50 = 1060 uL/kg

CAS# 7732-18-5:

Oral, rat: LD50 >90 mL/kg

Carcinogenicity:

CAS# 64-19-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No teratogenic effects were observed among the offspring of mice, rats, or rabbits that had been given very large doses of apple cider vinegar (containing acetic acid) during pregnancy. Acetic acid treatment of suckling rats (via maternal administration) was associated with abnormalities of behavioral testing.

Reproductive:

Intratesticular, rat: TDLo = 400 mg/kg (male 1 day(s) pre-mating) Fertility - male fertility index (e.g. # males impregnating females per # males exposed to fertile non-pregnant females).

Mutagenicity:

Sister Chromatid Exchange: Human, Lymphocyte = 5 mmol/L.; Unscheduled DNA Synthesis:

Administration onto the skin, mouse = 79279 ug/kg.; Cytogenetic Analysis: Hamster, Ovary = 10 mmol/L.

Neurotoxicity:

No information found

Section 12 - Ecological Information

Ecotoxicity:

Fish: Fathead Minnow: LC50 = 88 mg/L; 96 Hr; Static bioassay @ 18-22°C Fish: Bluegill/Sunfish: LC50 = 75 mg/L; 96 Hr; Unspecified Fish: Goldfish: LC50 = 423 mg/L; 24 Hr; Unspecified Water flea Daphnia: EC50 = 32-47 mg/L; 24-48 Hr; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 8.86-11 mg/L; 5,15,25 min; Microtox test. If released to water or soil, acetic acid will biodegrade readily. Evaporation from dry surfaces is likely to occur. When spilled on soil, the liquid will spread on the surface and penetrate into the soil at a rate dependent on the soil type and its water content. Acetic acid shows no potential for biological accumulation or food chain contamination.

Environmental:

If released to the atmosphere, it is degraded in the vapor-phase by reaction with photochemically produced hydroxyl radicals (estimated typical half-life of 26.7 days). It occurs in atmospheric particulate matter in acetate form and physical removal from air can occur via wet and dry deposition.

Physical:

Natural waters will neutralize dilute solutions to acetate salts.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.



Material Safety Data Sheet
Acetic Acid Solutions, 0.1% - 56% V/V

Section 14 - Transport Information

US DOT

	50 to 80% W/W	10% to 50% W/W	Less than 10% W/W
Shipping Name:	Acetic acid solution	Acetic acid solution	Not regulated
Hazard Class:	8	8	
UN Number:	UN2790	UN2790	
Packing Group:	PG II	PG III	

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 64-19-7 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.

SARA Reportable Quantities (RQ):

CAS# 64-19-7: 5000 lb. final RQ; 2270 kg final RQ

CERCLA/SARA Section 313:

Not reportable under Section 313.

OSHA - Highly Hazardous:

None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

CAS# 64-19-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 64-19-7 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 64-19-7 is listed on the Canadian Ingredient Disclosure List.
CAS# 7732-18-5 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: October 21, 1997

Revision Date: September 4, 2009

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