

# MSDS • Acetic Acid 3%

Loose in the Lab, Inc.  
9462 South 560 West  
Sandy, Utah 84070  
801-568-9596

Issue Date 7/07/2015

## SECTION 1 • CHEMICAL PRODUCT

Product Name: Acetic Acid, 3% (v/v)

Mixture. RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Acetic acid; Water CI#: Not applicable.

Synonym: Acetic Acid, 3% Chemical Name: Not applicable.

Chemical Formula: Not applicable.

## SECTION 2 • COMPOSITION, INFORMATION ON INGREDIENTS

Composition:

Name	CAS#	% by Weight
Acetic Acid	64-19-7	3
Water	7732-18-5	97

Toxicological Data on Ingredients: Acetic acid: ORAL (LD50): Acute: 3310 mg/kg [Rat]. 4960 mg/kg [Mouse]. 3530 mg/kg [Rat]. DERMAL (LD50): Acute: 1060 mg/kg [Rabbit]. VAPOR (LC50): Acute: 5620 ppm 1 hours [Mouse].

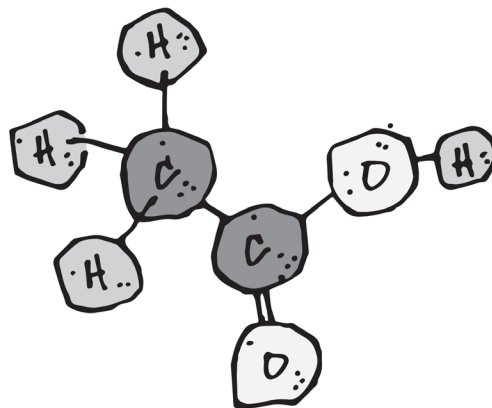
## SECTION 3 • HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), . Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation (lung sensitizer). Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Acetic acid]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.



## SECTION 4 • FIRST AID MEASURES

### *Eye Contact:*

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

### *Skin Contact:*

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### *Serious Skin Contact:*

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

### *Inhalation:*

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

### *Ingestion:*

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

## SECTION 5 • FIRE FIGHTING MEASURES

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Acetic acid vapors may form explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phosphorus trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degrees C. Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive. (Acetic acid)

## SECTION 6 • ACCIDENTAL RELEASE MEASURES

### *Small Spill:*

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### *Large Spill:*

Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## SECTION 7 • HANDLING AND STORAGE

### *Precautions:*

Keep locked up.. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

*Storage:* Keep container tightly closed. Keep container in a cool, well-ventilated area.

## SECTION 8 • EXPOSURE CONTROLS, PERSONAL PROTECTION

### *Engineering Controls:*

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

### *Personal Protection:*

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### *Personal Protection in Case of a Large Spill:*

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### *Exposure Limits:*

Acetic acid TWA: 10 STEL: 15 (ppm) [Australia] TWA: 25 STEL: 27 (mg/m<sup>3</sup>) [Australia] TWA: 10 STEL: 15 (ppm) from NIOSH TWA: 25 STEL: 37 (mg/m<sup>3</sup>) from NIOSH TWA: 10 STEL: 15 (ppm) [Canada] TWA: 26 STEL: 39 (mg/m<sup>3</sup>) [Canada] TWA: 25 STEL: 37 (mg/m<sup>3</sup>) TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 10 (ppm) from OSHA (PEL) [United States] TWA: 25 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

## SECTION 9 • PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Liquid.

Odor: Vinegar-like. Sour (Strong.)

Taste: Vinegar-like. Sour (Strong.)

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): 5 [Acidic.]

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Weighted average: 100.54°C (213°F)

Melting Point: May start to solidify at 16.6°C (61.9°F) based on data for: Acetic acid.

Critical Temperature: The lowest known value is 321.67°C (611°F) (Acetic acid).

Specific Gravity: Weighted average: 1 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Weighted average: 2.28 kPa (@ 20°C)

Vapor Density: The highest known value is 2.07 (Air = 1) (Acetic acid).

Weighted average: 0.66 (Air = 1)

Volatility: Not available.

Odor Threshold: The highest known value is 0.48 ppm (Acetic acid)

Water/Oil Dist. Coeff.: The product is more soluble in water. Ionicity (in Water): Not available.

Dispersion Properties: Partially dispersed in methanol, diethyl ether, n-octanol. See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility: Easily soluble in cold water, hot water, methanol, acetone. Partially soluble in diethyl ether, n-octanol.

## SECTION 10 • STABILITY AND REACTIVITY

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents, reducing agents, metals, acids, alkalis.

Corrosivity: Corrosive in presence of zinc. Slightly corrosive in presence of steel, of aluminum, of copper. Non-corrosive in presence of glass, of stainless steel(304), of stainless steel(316).

Special Remarks on Reactivity:

Reacts violently with strong oxidizing agents, acetaldehyde, and acetic anhydride. Material can react with metals, strong bases, amines, carbonates, hydroxides, phosphates, many oxides, cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, carbonates. ammonium nitrate, ammonium thiosulfate, chlorine trifluoride, chlorosulfonic acid, perchloric acid, permanganates, xylene, oleum, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenediamine, ethylene imine. (Acetic acid)

Special Remarks on Corrosivity: Not available. Polymerization: Will not occur.

## SECTION 11 • TOXICOLOGICAL INFORMATION

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 110333 mg/kg (Rat) (Calculated value for the mixture). Acute dermal toxicity (LD50): 35333 mg/kg (Rabbit) (Calculated value for the mixture).

Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Acetic acid].

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), . Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation (lung sensitizer). Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs.

Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans:

May affect genetic material and may cause reproductive effects based on animal data. No human data found. (Acetic acid)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: causes skin irritation with redness and pain. Eyes: causes eye irritation with redness, pain and tearing. Inhalation: Causes respiratory tract and mucous membrane irritation with coughing, dyspnea, thoracic pain. May cause bronchopneumonia, chemical pneumonitis, pulmonary edema. May affect behavior/central nervous system and cause central nervous system depression with headache, nausea, vomiting. Ingestion: Ingestion of large amounts may cause gastrointestinal (digestive) tract irritation with nausea, diarrhea, abdominal pain. May affect urinary system (albuminuria, hemoglobinuria, anuria, uremia kidney damage) Chronic Potential Health Effects: Ingestion and Inhalation: Prolonged or repeated ingestion of large doses may affect behavior, liver, and metabolism (weight loss). Prolonged or repeated inhalation may cause pharyngitis, chronic bronchitis, and may affect blood (changes in leukocyte count), and urinary system (kidney damage) Skin: Prolonged or repeated skin contact may cause irritation or dermatitis, hyperkeratosis. Eyes: Prolonged or repeated eye contact may cause conjunctivitis

## SECTION 12 • ECOLOGICAL INFORMATION

Ecotoxicity: Not available. BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself. Special Remarks on the Products of Biodegradation: Not available.

## SECTION 13 • DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## SECTION 14 • TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

## SECTION 15 • REGULATORY INFORMATION

Federal and State Regulations:

New York release reporting list: Acetic acid Rhode Island RTK hazardous substances: Acetic acid Pennsylvania RTK: Acetic acid Florida: Acetic acid Minnesota: Acetic acid Massachusetts RTK: Acetic acid New Jersey: Acetic acid TSCA 8(b) inventory: Acetic acid; Water

Other Regulations: Not available. or of its ingredients Other Classifications: WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): R36/37/38- Irritating to eyes, respiratory system and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

HMIS (U.S.A.): Health Hazard: 2 Fire Hazard: 0 Reactivity: 0 Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1 Flammability: 0 Reactivity: 0 Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

## SECTION 16 • OTHER INFORMATION

This Material Safety Data Sheet (MSDS) is to provided to you for your guidance only and is based upon publicly available information and tests that are believed to be reliable. However, Loose in the Lab, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. This data is offered solely for your evaluation, consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor purchasing and using the materials to be in accordance with applicable local, state or federal laws and regulations in addition to the mandates and guidelines of their specific school district.

The conditions and methods of handling, storage, use and disposal of the product described in this MSDS are beyond the control of Loose in the Lab, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY FOR YOUR ACTIONS OR DECISION IN USING THIS PRODUCT AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT. Please consult your district or state risk management specialist if you have any concerns.

