

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Acetic Acid Solution, 46% w/w, Tech
Product number(s): 5009030

1.2 Details of the supplier of the safety datasheet

Borges & Mahoney Co
100 Lincoln Rd East
Vallejo, CA 94591
707-643-3300 ph
707-643-3367 fx

1.3 Emergency telephone number

For domestic USA - Chemtrec: +1 800-424-9300, contract # 643968

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR1910 (OSHAHCS)

Flammable liquids (Category 3), H226
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318

2.2 GHS Label elements, including precautionary statements

Pictogram(s)



Signal word **Danger**

Hazard statement(s)

H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary statements(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 :

Name	CAS number	%	GHS–US classification
Acetic acid, glacial	64-19-7	40-50%	Flam. Liq. 3, H226; Skin Corr. 1A; Eye Dam. 1, h226, h314, H318
Water	7732-18-5	BALANCE	N/A

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

5. FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Hazards

Carbon oxides

5.3 Advice for firefighters

Advice

Use water spray to cool unopened containers.

Equipment

Wear self-contained breathing apparatus for firefighting if necessary

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8..

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal, see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Moisture sensitive.

Storage class (TRGS 510): Flammable liquids

7.3 Specific end user(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameter

Components with workplace control parameters

Component	CAS-No.	Control parameters	Value
Acetic acid, glacial	64-19-7	TWA STEL	10 ppm 15 ppm
		ST TWA	15 ppm / 37 mg/m ³ 10 ppm / 25 mg/m ³

8.2 Exposure controls

Appropriate Engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in

accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other information

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Amber Liquid
Color	colorless
Upper/lower flammability or explosive limits	No data available
Odor	vinegar-like
Odor threshold	No data available
Vapor pressure	No data available
Vapor density	No data available
pH	acidic
Relative density	1.095
Melting point	N/A
Freezing point	No data available
Initial Boiling point and boiling range	ca. 77 C
Flash point	No data available
Evaporation rate	ca. 1
Flammability (solid, gas)	No data available
Water solubility	Very Soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

9.2 Other Information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3,310 mg/kg

LC50 Inhalation - Mouse - 1 h - 5620 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Blood:Other changes.

LC50 Inhalation - Rat - 4 h - 11.4 mg/l

LD50 Dermal - Rabbit - 1,112 mg/kg

No data available

Skin corrosion/irritation

Causes severe skin burns and eye damage. pH: 0.0

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive to eyes

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity – single exposure

no data available

Specific target organ toxicity – repeated exposure

no data available

Aspiration hazard

No data available

Additional Information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts.

Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis,

fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 1,000 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* (Water flea) - > 300.82 mg/l - 48 h (OECD Test Guideline 202)

12.2 Persistence and degradability

Biodegradability aerobic: Exposure time 30 d, Result: 99 % - Readily biodegradable, Remarks: Expected to be biodegradable

Biochemical Oxygen Demand (BOD): 880 mg/g

12.3 Bioaccumulative potential

Hydrochloric Acid, 37% w/w (7647-01-0)

Log Pow 0.25 (QSAR)

Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

12.4 Mobility in soil

Hydrochloric Acid, 37% w/w (7647-01-0)

Ecology - soil May be harmful to plant growth, blooming and fruit formation

12.5 Results in PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Avoid release to the environment

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Container

Dispose of contaminated packaging as unused product..

14. TRANSPORT INFORMATION

In accordance with DOT

DOT NA No.	UN2790
DOT Proper Shipping Name	Acetic acid solution more than 10% but less than 50% acid, by weight
Hazardous Class	8
Packing group (DOT)	II
Reportable Quantity (RQ)	5000#
Hazard Labels:	8



15. REGULATORY INFORMATION

US Federal regulations

Acetic Acid (64-19-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Not listed on the United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists) : 5000 lb

Sodium Acetate, Trihydrate (6131-90-4)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

International regulations

CANADA

Acetate Buffer for Chlorine, pH 4.0

WHMIS Classification

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Acetic Acid (64-19-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class B Division 3 - Combustible Liquid

Class E - Corrosive Material

Sodium Acetate, Trihydrate (6131-90-4)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

National regulations

Acetic Acid (64-19-7)

Listed on the Canadian IDL (Ingredient Disclosure List)

Sodium Acetate, Trihydrate (6131-90-4)

Not listed on the Canadian IDL (Ingredient Disclosure List)

TSCA Inventory List:

All of the ingredients (or their hydrate forms) are listed.

CERCLA Reportable Quantity (RQ):

CAS# 64-19-7: RQ = 5000 pounds.

SARA Section 302 Threshold Planning Quality (TPQ):

None of the ingredients have a TPQ.

SARA Title Codes:

CAS # 64-19-7: acute, chronic, flammable.

OSHA:

This product is not considered to be highly hazardous by OSHA Hazard Communication Standard.

16. OTHER INFORMATION

HMIS Rating

HEALTH: 2

FIRE: 1

REACTIVITY: 0

SPECIFIC HAZARD: N/A

Further Information

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