



SAFETY DATA SHEET

In accordance with the OSHA Act 85 of 1993,
Hazardous Chemical Substances Regulations of 1995,
and SANS 10234:2019

Version 1.0

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: IDENTIFICATION

Product Name: Acetic Acid

Chemical Formula: CH₃COOH (C₂H₄O₂)

CAS Number: 64-19-7

Recommended Use: Laboratory chemical, Industrial manufacturing, Food additive

Restrictions on Use: None known.

Details of the Supplier:

Company: M4 Solutions Pty Ltd.

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Rocky Drift

WHITERIVER

1240

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SECTION 2: HAZARD IDENTIFICATION

GHS Classification:

- Flammable Liquid, Category 3
- Skin Corrosion, Category 1A
- Serious Eye Damage, Category 1



GHS Label Elements:

Hazard Pictograms:



Signal Word: DANGER

Hazard Statements:

- H226: Flammable liquid and vapor.
- H314: Causes severe skin burns and eye damage.

Precautionary Statements:

Prevention:

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P240: Ground and bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting equipment.
- P242: Use non-sparking tools.
- P243: Take action to prevent static discharges.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P264: Wash hands and exposed skin thoroughly after handling.

Response:

- P370+P378: In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER/doctor.
- P321: Specific treatment (see first aid instructions on label).
- P363: Wash contaminated clothing before reuse.



Storage:

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

Disposal:

- P501: Dispose of contents/container to hazardous waste collection point in accordance with local/regional/national/international regulation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name CAS Number Purity

Acetic Acid	64-19-7	≥ 99%
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SECTION 4: FIRST AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

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

In case of skin contact: Remove contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15 minutes. Get medical attention immediately.

In case of eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

If swallowed:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Causes severe burns to all tissues. Symptoms may include redness, pain, blurred vision, and tissue damage. Ingestion causes severe swelling, severe damage to the delicate tissues and danger of perforation. Inhalation of vapours may cause respiratory irritation, shortness of breath, headache, and dizziness.



Indication of any immediate medical attention and special treatment needed:

Treat symptomatically. Chemical eye burns may require extended irrigation.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture: Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Containers may explode when heated. Hazardous combustion products: Carbon oxides.

Advice for firefighters: Wear self-contained breathing apparatus and full protective clothing. Cool closed containers exposed to fire with water spray. Evacuate area and fight fire from a safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures:**

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

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Contain spillage and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to



prevent the build-up of electrostatic charge. Use explosion-proof equipment. Use only in a chemical fume hood.

Conditions for safe storage, including any incompatibilities: Store in cool, dry, well-ventilated area. Keep container tightly closed. Keep away from heat, sparks, and open flame. Store away from incompatible materials.

Incompatible materials: Strong oxidizing agents, Strong bases, Metals, Metal oxides, Alcohols, Peroxides.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

- 10 ppm (25 mg/m³) for 8-hour time-weighted average (TWA)
- 15 ppm (37 mg/m³) for short-term exposure limit (STEL)

Engineering controls: Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure eyewash stations and safety showers are close to the workstation location.

Personal protective equipment:

- **Eye/face protection:** Tightly fitting safety goggles or face shield.
- **Skin protection:** Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique 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.
- **Material for gloves:** Butyl rubber, Nitrile rubber, Neoprene, or equivalent.
- **Body protection:** Complete suit protecting against chemicals. Flame retardant antistatic protective clothing.
- **Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colourless liquid

Odour: Strong, pungent vinegar-like odour

Odour threshold: 0.48 ppm

pH: 2.4 (1.0 M solution)

Melting point/freezing point: 16.6°C (61.9°F)

Initial boiling point and boiling range: 117.9°C (244.2°F)

Flash point: 40°C (104°F) - closed cup

Evaporation rate: No data available

Flammability (solid, gas): Not applicable

Upper explosion limit: 19.9% (v)

Lower explosion limit: 4.0% (v)

Vapor pressure: 15.7 hPa (11.8 mmHg) at 20°C (68°F)

Vapor density: 2.07 (Air = 1)

Relative density: 1.049 g/cm³ at 20°C (68°F)

Solubility: Fully miscible with water

Partition coefficient: n-octanol/water: log Pow: -0.17

Auto-ignition temperature: 463°C (865°F)

Viscosity: 1.22 mPa.s at 20°C (68°F)

Explosive properties: Not explosive

Oxidizing properties: Not oxidizing

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Reacts with strong bases and oxidizers. Corrosive to metals.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Reacts violently with strong oxidizers and bases. Contact with metals may evolve flammable hydrogen gas.

Conditions to avoid: Heat, flames, sparks, and other sources of ignition. Incompatible materials.

Incompatible materials: Strong oxidizing agents, Strong bases, Metals, Metal oxides, Alcohols, Peroxides.

Hazardous decomposition products: Carbon monoxide, Carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50 (Rat): 3,310 mg/kg

Inhalation LC50 (Rat): 11.4 mg/L (4h)

Dermal LD50 (Rabbit): 1,060 mg/kg



Skin corrosion/irritation: Causes severe skin burns.

Serious eye damage/eye irritation: Causes serious eye damage.

Respiratory or skin sensitization: Not classified based on available data.

Specific target organ toxicity - single exposure: May cause respiratory irritation.

Additional Information: Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and oedema of the larynx, spasm, inflammation and oedema of the bronchi, pneumonitis, pulmonary oedema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Toxicity to fish:

LC50 (Pimephales promelas, fathead minnow): 79 mg/L (96h)

EC50 (Daphnia magna, water flea): 65 mg/L (48h)

IC50 (Pseudokirchneriella subcapitata, algae): 90 mg/L (72h)

Persistence and degradability:

Readily biodegradable

Biodegradation: 96% (20 days)

Bio accumulative potential:

Low bioaccumulation potential

log Pow: -0.17

Mobility in soil:

High mobility in soil.

Results of PBT and vPvB assessment:

This substance is not considered to be PBT (persistent, bio accumulative and toxic) or vPvB (very persistent and very bio accumulative).

Other adverse effects:

Harmful to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

– Waste treatment methods:

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.



- **Contaminated packaging:**
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN number:

- ADR/RID: UN 2789
- IMDG: UN 2789
- IATA: UN 2789

UN proper shipping name:

- ADR/RID: ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, with more than 80% acid, by mass
- IMDG: ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, with more than 80% acid, by mass
- IATA: Acetic acid, glacial or Acetic acid solution, with more than 80% acid, by mass

Transport hazard class(es):

- ADR/RID: 8 (3)
- IMDG: 8 (3)
- IATA: 8 (3)

Packing group:

- ADR/RID: II
- IMDG: II
- IATA: II

Environmental hazards:

- ADR/RID: No
- IMDG Marine pollutant: No
- IATA: No

SECTION 15: REGULATORY INFORMATION

International Inventories:

- TSCA (USA): Listed
- DSL/NDL (Canada): Listed
- EINECS/ELINCS (EU): Listed
- ENCS (Japan): Listed
- IECSC (China): Listed
- KECL (Korea): Listed



- PICCS (Philippines): Listed
- AICS (Australia): Listed
- NZIoC (New Zealand): Listed

US Federal Regulations:

- SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.
- SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard

US State Regulations:

- California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION**NFPA Rating:**

- Health: 3
- Flammability: 2
- Instability: 0
- Special Hazard: None

HMIS Rating:

- Health: 3
- Flammability: 2
- Physical Hazard: 0
- Personal Protection: H

Revision Date: 16/04/2025

Disclaimer: 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.

END OF SAFETY DATA SHEET