SAFETY DATA SHEET

PRODUCT NAME: ACETIC ACID 49%

Issue Date: 31 October 2025

SECTION 1. IDENTIFICATION

Product Name: Acetic Acid
Other Names: Acetic Acid 49% Solution; Ethanoic Acid; Methane carboxylic Acid; Vinegar Acid
Product Code: ZAACID49, CAA495
Uses: Manufacturing of acetic anhydride, cellulose acetate, and vinyl acetate monomer; acetic esters; chloroacetic acid; production of plastics, pharmaceuticals, dyes, insecticides, photographic chemicals, etc.; latex coagulant; oil-well acidiser; textile printing. TECHNICAL OR INDUSTRIAL USE ONLY.
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton
Phone: 079744971 Web: www.hamchem.co.nz Email: info@hamchem.nz

- **In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.**
- **In case of poisoning phone National Poisons Centre – 0800 764 766**

SECTION 2. HAZARD IDENTIFICATION

GHS Classifications
Corrosive to Metals – Category 1
Acute Oral Toxicity – Category 4
Skin Corrosion – Category 1C
Serious Eye Damage – Category 1
Specific Target Organ Toxicity (repeated exposure) – Category 2
Hazardous to Terrestrial Vertebrates

Signal Word: Danger

Hazard Statements
H290 May be corrosive to metals
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H373 May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention
P234 Keep only in original packaging
P270 Do not eat, drink or smoke when using this product
P260 Do not breathe dusts or mists
P264 Wash hands thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTRE or Doctor if you feel unwell.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTRE/Doctor
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 CENTRE or Doctor
P314 Get medical advice/attention if you feel unwell
P390 Absorb spillage to prevent material damage.

Storage
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national regulations

SECTION 3. COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%w/w)
Water	7732-18-5	51
Acetic Acid	64-19-7	49

SECTION 4. FIRST AID MEASURES

Swallowed: Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek immediate medical attention. Do NOT delay.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attention. Removal of contact lenses after an eye injury to be undertaken only by skilled personal.

Skin: If skin or hair contact occurs, immediately remove any contaminated clothing including shoes and flush skin and hair with running water. If redness, swelling, blistering or irritation occurs, seek medical advice. For skin burns, flood burnt area with plenty of water and cover with a clean, dry dressing. Seek immediate medical attention.

Inhaled: Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth to mouth method. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Prostheses such as false teeth must be removed. Seek medical attention immediately. Affected individual needs complete rest and must be kept under observation even if no symptoms are manifested.

Advice to Doctor: Treatment based on sound judgment of physician and individual reactions of patient. Observe for pulmonary edema.

Medical Conditions Aggravated by Exposure: No information available on medical conditions aggravated by exposure to this product.

SECTION 5. FIRE FIGHTING MEASURES

General Measures: If safe to do so, remove containers from the path of fire. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up would could result in container rupture.

Flammability Conditions: No data available

Extinguishing Media: In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions; dry chemicals, carbon dioxide, alcohol foam or water spray.

Fire/Explosion Hazard: Reacts with mild steel, galvanized steel/zinc producing hydrogen gas which may form an explosive mixture with air. Vapours form explosive mixtures with air (above 39°C).

Hazardous Products of Combustion: Carbon monoxide, Carbon dioxide, Toxic fumes.

Special Fire Fighting Instructions: Clear fire area of all non-emergency personnel. Stay upwind. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow firefighting water to reach waterways, drains or sewers. Store fire-fighting water for treatment.

Personal Protective Equipment: Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.

Flash Point: Not applicable
Lower Explosion Limit: 5.3%
Upper Explosion Limit: 16.6%
Auto Ignition Temperature: No data available
Hazchem Code: 2R

SECTION 6. ACCIDENTAL RELEASE MEASURES

General Response Procedure: Avoid direct contact with skin, eyes and clothing. Do not breathe vapour or fumes. Other precautions – avoid ignition sources. Ventilate area to dispel residual vapour or fumes. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture.

Clean Up Procedures: Eliminate all ignition sources. Contain spill by diking. If fire potential exists, blanket spill with alcohol type aqueous film forming foam or use water fog stream to disperse vapours. Neutralize the residue with sodium carbonate or crushed limestone. Absorb with an inert dry material and place in an appropriate waste disposal container. Flush area with water to remove trace residue. Water may be used to flush spills away from fire exposures and to dilute spills to nonflammable mixtures. Water streams should not be directed to the liquid, as this will cause the liquid to boil and generate more vapour. Dike and collect water used to fight fire for neutralization before release.

Containment: Stop leak if safe to do so.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.

Evacuation Criteria: Evacuate all unnecessary personnel.

Personal Precautionary Measures: Personnel involved in the clean up should wear full protective clothing as listed in the 'Exposure Controls & Personal Protection' section of this SDS. Avoid direct contact with

skin, eyes and clothing. Do not breathe vapour or fumes. Other precautions – avoid ignition sources. Ventilate area to dispel residual vapour or fumes. Wear protective clothing, boots, impervious gloves and safety glasses. The chemical is corrosive.

SECTION 7. HANDLING & STORAGE

Handling: Do not breathe vapour or mist. Wear protective gloves/clothing and eye/face protection. Ground and secure containers when dispensing or pouring product. Use explosion proof equipment and non-sparking tools. Keep away from heat and flame. When handling - do not eat, drink or smoke. Use in a well-ventilated place/use protective clothing commensurate with exposure levels. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

Storage: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in 'Stability & Reactivity' section of this SDS. Store in a flame proof area. Keep away from ignition source such as heat, lighting, strong oxidizing agents, strong acid-bases.

Container: Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Do not use aluminum, mild steel or galvanized containers.

SECTION 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

General: The following workplace exposure standard has been established by WorkSafe NZ; Acetic Acid (CAS No. 64-19-7) TWA = 10ppm (25mg/m³) 8h; STEL = 15ppm (37mg/m³) 15 mins. NOTE: The exposure value of the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. Peak limitation is a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric concentration should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Exposure Limits: No data available

Biological Limits: No information available on biological value limits for this product.

Engineering Measures: Facilities storing or utilising this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion resistant ventilation system.

Personal Protection Equipment:
RESPIRATOR: Adequate ventilation is required to keep concentration below exposure limits. Type AB filter of sufficient capacity. Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately upon detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate. The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. (AS/NZS 1715/1716)

EYES: Use approved chemical safety goggles or face protection. Contact lenses should not be worn when working with this chemical. (AS/NZS 1336/1337)

HANDS: Appropriate chemical resistant gloves should be worn. Use Butyl rubber or Polyethylene gloves. (AS/NZS 2161)

CLOTHING: Skin contact should be prevented through the use of suitable protective clothing and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance. (AS/NZS 3765/2210)

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Very distinct, strong 'vinegar' odour
Colour	Colourless
pH	No Data Available
Vapour Pressure	45 torr (@ 25°C)
Relative Vapour Density	2.1
Boiling Point	79 – 140°C
Melting Point	17°C
Freezing Point	No Data Available
Solubility	Miscible
Specific Gravity	0.8 – 1
Flash Point	Not Applicable
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables that Could Contribute Unusual Hazards to a Fire	No Data Available
Properties that May Initiate or Contribute to Fire Intensity	No Data Available
Reactions that Release Gases or Vapours	Reacts with metals liberating flammable hydrogen gas
Release of Invisible Flammable Vapours and Gases	No Data Available

SECTION 10. STABILITY & REACTIVITY

General Information: Corrosive Liquid.

Chemical Stability: Product is stable under normal conditions of use, storage and temperature.

Condition to Avoid: Heat, moisture.

Materials to Avoid: Reacts (sometimes violently) with strong acids, aliphatic amines, alkanolamines, alkylene oxides, epichlorohydrin, acetic anhydride, 2-aminoethanol, ammonia, ammonium nitrate, bromine pentafluoride, chlorosulphonic acid, chromic acid, chromium trioxide, ethylenediamine, ethyleneimine, hydrogen peroxide, isocyanates, oleum, perchloric, permanganates, phosphorous isocyanate, phosphorous trichloride, sodium peroxide, xylene. Attacks many forms of rubber, plastics and coatings. Attacks cast iron, stainless steel and other metals forming flammable hydrogen gas. Avoid strong bases.

Hazardous Decomposition Products: Toxic gas.

Hazardous Polymerization: Hazardous polymerization has not been reported.

SECTION 11. TOXICOLOGICAL INFORMATION

General Information: Oral (rat) LD_{50}: 3310mg/kg; Inhalation (rat) LC_{50}: 11.40mg/4h; Skin (rabbit) LC_{50}: 1060mg/kg

Eye Irritant: Causes severe eye burns. May cause permanent eye damage. Symptoms of exposure may include: eye irritation, burning sensation, pain, watering and/or change of vision. Overexposure (prolonged or repeated exposure) may cause injury to the eyes.

Ingestion: Causes digestive tract burns. Symptoms of exposure may include: Inflammation of mouth, throat, esophagus and/or stomach. Nausea, vomiting, loss of appetite, gastrointestinal irritation and/or diarrhea.

Inhalation: Symptoms of exposure may include; nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Accumulation of fluid in the lungs (pulmonary edema) may occur. Overexposure (prolonged or repeated exposure) may cause respiratory tract damage. Immediate effects: Corrosive to the respiratory tract, causing pneumonia, a blood clot within a blood vessel. Long-term effects: exposure can lead to chronic inflammation of the respiratory tract.

Skin Irritant: Causes burns. Harmful if absorbed through the skin. Symptoms of exposure may include: Redness or discoloration, swelling, itching, burning or blistering of skin. Prolonged or repeated contact may cause skin sensitization. Overexposure (prolonged or repeated exposure) may cause skin damage. Long-term effects: exposure can lead to darkening of the skin.

Carcinogen Category: No data available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity (Aquatic & Terrestrial):

Fish toxicity:	Lepomis marcrochirus LC_{50}:	75mg/L (96h)
Crustacea toxicity:	Artemia salina EC_{50}:	32mg/L (48h)

Persistence/Degradability: No information on persistence/degradability available for this product.

Mobility: No information on mobility for this product. Miscible with water.

Environmental Fate: Avoid contaminating waterways, drains and sewers.

Bioaccumulation Potential: No information available on bioaccumulation for this product.

Environmental Impact: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all local, regional and national regulations. All empty packaging should be disposed of in accordance with local, regional and national Regulations or recycled/reconditioned at an approved facility. Handle contaminated packaging in the same way as the substance if self. Empty containers should be recycled or disposed of through an approved waste management facility. Contact a specialist disposal company or the local waste regulator for advice. Incinerate at an approved site following all local regulations. This material may be suitable for approved landfill.

SECTION 14. TRANSPORT INFORMATION

UN Number: 2790
Proper Shipping name: ACETIC ACID SOLUTION, more than 10% and less than 50% acid, by mass
Dangerous Goods Class: 8 – Corrosive.
Subsidiary Risk: No Data Available
Packing group: III
Hazchem Code: 2R

SECTION 15. REGULATORY INFORMATION

HSNO Classifications: 8.1A, 6.1D, 8.2C, 8.3A, 6.9B, 9.3C
HSNO Approval Code: HSR001581

SECTION 16. OTHER INFORMATION

End of SDS.