



Material Safety Data Sheet
Issue Date: 5-Sep-2014

ACETIC ACID 90%

Version No:2.0
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

ACETIC ACID 90%

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

PROPER SHIPPING NAME

ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION

PRODUCT USE

■ Used according to manufacturer's directions.

SUPPLIER

Company: Jasol
Address:
105 Rutherford Street
Christchurch,
New Zealand
Telephone: +64 3 384 4433
Emergency Tel: 0800 243 622
Fax: +64 3 384 4431
Email: jasolnzorders@gwf.com.au

Company: Jasol
Address:
81 Leonard Road
Penrose
Auckland,
New Zealand
Telephone: +64 9 580 2105
Emergency Tel: 0800 243 622
Fax: +64 9 581 2136

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Aquatic Hazard Category 3
Acute Toxicity (Dermal) Category 4
Specific Target Organ Systemic Toxicity Category 2
Flammable Liquid Category 3
Metal Corrosion Category 1
Serious Eye Damage Category 1
Skin Corrosion/Irritation Category 1B
Ecotoxic to Terrestrial Vertebrates



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined using GHS/HSNO criteria:

3.1C 6.1D 6.9B 8.1A 8.2B 8.3A 9.1C

Flammable liquid and vapor

Harmful in contact with skin

Harmful to human target organs or systems

May be corrosive to metals

Causes severe skin burns and eye damage

Causes serious eye damage

Harmful to aquatic life

Harmful to Terrestrial Vertebrates

PRECAUTIONARY STATEMENTS

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Keep only in original container.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools.

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Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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.
Call a POISON CENTER or doctor/physician if you feel unwell.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.
Store in corrosive resistant container or with a resistant inner liner.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
Acetic acid glacial	64-19-7	90
Water		10

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

- If this product comes in contact with the eyes:
 - Immediately hold eyelids apart and flush the eye continuously with running water.
 - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 - Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
 - Transport to hospital or doctor without delay.

SKIN

- If skin or hair contact occurs:
 - Immediately flush body and clothes with large amounts of water, using safety shower if available.
 - Quickly remove all contaminated clothing, including footwear.
 - Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
 - Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
- Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

NOTES TO PHYSICIAN

- For acute or short term repeated exposures to strong acids:
 - Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
 - Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling.
 - Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
 - Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

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Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

FIRE/EXPLOSION HAZARD

- Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), other pyrolysis products typical of burning organic material. May emit corrosive fumes.
- Flammable.
- Moderate fire and explosion hazard when exposed to heat or flame.
- Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

PERSONAL PROTECTION

Glasses:
Chemical goggles.

Gloves:
PVC chemical resistant type.

Respirator:
Type AB Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- WARNING: Contact with water generates heat.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
- Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.

SUITABLE CONTAINER

- Lined metal can. Lined metal drum. Lined metal safety cans.
- Packing as supplied and/or recommended by manufacturer.
- Plastic lining or containers may only be used if approved for flammable liquid (non-polar type).
- DO NOT use aluminium or galvanised containers.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.
- Check regularly for spills and leaks.
- Glass container is suitable for laboratory quantities.
- DO NOT use mild steel or galvanised containers.

In accordance with ADG Code 5.9.8. Bulk transport by Road Tankers complying with construction standards RT1 or RT7

STORAGE REQUIREMENTS

- Store in approved flammable liquid storage area.
- No smoking, naked lights/ignition sources.
- Keep containers securely sealed.
- Store away from incompatible materials in a cool, dry, well-ventilated area.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
New Zealand Workplace Exposure Standards (WES)	acetic acid glacial (Acetic acid)	10	25	15	37

PERSONAL PROTECTION

RESPIRATOR

Type AB Filter of sufficient capacity

EYE

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure
- Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted
- Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.
- Alternatively a gas mask may replace splash goggles and face shields.

HANDS/FEET

- Elbow length PVC gloves.
- When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.
- Neoprene rubber gloves.

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS

- Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.
- In confined spaces or at elevated temperatures, where concentrated mist or fumes are present, an impervious suit ventilated by a supply of clean, cooled air may be required.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Clear colourless mobile flammable corrosive liquid (> 16 deg.C), or clear crystalline solid (in cold weather) with a characteristic sharp, pungent, vinegar-like odour. Mixes with water, alcohol, glycerol, ether and most organic solvents.

PHYSICAL PROPERTIES

Liquid.
Mixes with water.
Corrosive.
Acid.

State	Liquid	Molecular Weight	60.06
Melting Range (°C)	16.6	Viscosity	Not Available
Boiling Range (°C)	118	Solubility in water (g/L)	Miscible
Flash Point (°C)	43- 44.5 TCC	pH (1% solution)	2.9 approx.
Decomposition Temp (°C)	Not available.	pH (as supplied)	Not available
Autoignition Temp (°C)	463	Vapour Pressure (kPa)	1.5 @ 20 deg C
Upper Explosive Limit (%)	16	Specific Gravity (water=1)	1.05
Lower Explosive Limit (%)	5	Relative Vapour Density (air=1)	2.07
Volatile Component (%vol)	100	Evaporation Rate	0.99 BuAc=1

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Contact with alkaline material liberates heat.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS**ACUTE HEALTH EFFECTS****SWALLOWED**

- The material can produce severe chemical burns within the oral cavity and gastrointestinal tract following ingestion.
- The material can produce severe chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

EYE

- When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
- Direct eye contact with acid corrosives may produce pain, lachrymation, photophobia and burns. Mild burns of the epithelia generally recover rapidly and completely.
- Dilute solutions of low-molecular organic acids cause conjunctival hyperaemia, prompt pain and corneal injury.
- Acetic acid produces conjunctival irritation at concentrations below 10 ppm.

SKIN

- The material can produce severe chemical burns following direct contact with the skin.

CHRONIC HEALTH EFFECTS

- Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Repeated minor oral exposure to acetic acid can cause blackening of the skin and teeth, erosion of the teeth, vomiting, diarrhoea, nausea. Repeated minor vapour exposure may cause chronic respiratory inflammation and bronchitis. It is reported that workers exposed for 7 to 12 years at concentrations of 60 ppm acetic acid, plus one hour daily at 100-260 ppm had no injury except slight irritation of the respiratory tract, stomach, and skin although this report is equivocal as in another study different researchers found conjunctivitis, bronchitis, pharyngitis and erosion of exposed teeth apparently in the same workers. Occupational exposures for 7-12 years to concentrations of 80-200 ppm, at peaks, caused blackening and hyperkeratosis of the skin and hands, conjunctivitis (but no corneal damage), bronchitis and pharyngitis and erosion of the exposed teeth (incisors and canines).

TOXICITY AND IRRITATION

- Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis. NOAELs following repeated exposure to acetic acid and its salts range from 210 mg/kg bw/day (2-4 month acetic acid drinking water study; systemic toxicity) to 3600 mg/kg bw/day (acetic acid, sodium salt, 4 week dietary study; no effects reported). Signs of irritation/corrosion at the site of contact as well as systemic toxicity have been reported. Groups of 20 mice/sex were given 0.025% sodium acetate in drinking water (about 60 mg/kg bw/day) for 1 week before breeding, during a 9-day breeding period and (females only) throughout pregnancy, lactation and until the offspring were weaned at 3 weeks of age.

Section 12 - ECOLOGICAL INFORMATION

acetic acid glacial 96 hr LC50 (88) mg/L Fathead minnow Fish Source: Experimental

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
acetic acid glacial	LOW		LOW	HIGH

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Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
 Otherwise ensure that:
- licenced contractors dispose of the product and its container.
- disposal occurs at a licenced facility.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: CORROSIVE, FLAMMABLE LIQUID

HAZCHEM:

*2P Use alcohol resistant foam

Land Transport UNDG:

Class or division:	8	Subsidiary risk:	3
UN No.:	2789	UN packing group:	II
Shipping Name: ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, more than 80% acid, by mass			

Air Transport IATA:

ICAO/IATA Class:	8	ICAO/IATA Subrisk:	3
UN/ID Number:	2789	Packing Group:	II
Special provisions:	None		

Shipping Name: ACETIC ACID, GLACIAL

Maritime Transport IMDG:

IMDG Class:	8	IMDG Subrisk:	3
UN Number:	2789	Packing Group:	II
EMS Number:	F- E , S- C	Special provisions:	None
Limited Quantities:	1 L		

Shipping Name: ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, more than 80% acid, by mass

Section 15 - REGULATORY INFORMATION

NOTES

This substance should be managed in accordance with the requirements specified in the Cleaning Products (Flammable, Corrosive) Group Standard 2006, HSNO Approval Number HSR002529.

REGULATIONS

Regulations for ingredients

Acetic acid glacial (CAS: 64-19-7) is found on the following regulatory lists;

"CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Scheduled Toxic Substances", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Acetic Acid 90%

Specific advice on controls required for materials used in New Zealand can be found at

<http://www.ermanz.govt.nz/search/registers.html>

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Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE: 0800 POISON (0800 764 766)

NZ EMERGENCYSERVICES:111

Emergency response Number 0800 243 622

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the SDS Classification committee using a valuable literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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