SAFETY DATA SHEET

FORMIC ACID 84%

Infosafe No.: 7EFHX
ISSUED Date : 13/12/2017
ISSUED by: JASOL NEW ZEALAND

CLASSIFIED AS HAZARDOUS

1. IDENTIFICATION

GHS Product Identifier
FORMIC ACID 84%

Product Code
2180970

Company Name
JASOL NEW ZEALAND

Address
81 Leonard Road
Mt. Wellington Auckland
NEW ZEALAND

Telephone/Fax Number
Tel: +64 9 580 2105
Fax: +64 9 571 4388

Emergency phone number
0800 243 622

Emergency Contact Address
North Island:
81 Leonard Road, Mt. Wellington, Auckland 1060
Phone: +64 9 5802105
Fax: +64 9 5714388

South Island:
105 Rutherford Street, Christchurch 8023
Phone: +64 3 3844433
Fax: +64 3 3844431

(24 hour a day available)
0800 243622

E-mail Address
jasolnzorders@gwf.com.au

Recommended use of the chemical and restrictions on use
Dyeing and finishing of textile, leather treatment, chemicals (formates, oxalic acid, organic esters), manufacture of fumigants, insecticides, refrigerants, solvents for perfumes, lacquers, electroplating, brewing (antiseptic), silvering glass, cellulose formate, natural latex coagulant, ore flotation, vinyl resin plasticizers.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous

Goods on Land.
3.1D Flammable liquids: low hazard
6.1D (Oral) - Substance that is acutely toxic
6.8B Substance that is suspected to be a human reproductive or developmental toxicant
6.9A (Single exposure) - Substance that is toxic to human target organs or systems
8.1A Substance that is corrosive to metals
8.2B Substance that is corrosive to dermal tissue
8.3A Substance that is corrosive to ocular tissue

Signal Word (s)
DANGER

Hazard Statement (s)
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child.
H361f Suspected of damaging fertility.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Pictogram (s)
Corrosion,Exclamation mark,Health hazard

Precautionary statement – Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.

Precautionary statement – Response
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.
P310 Immediately call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Precautionary statement – Storage
P405 Store locked up.
P406 Store in corrosive resistant/ container with a resistant inner liner.

Precautionary statement – Disposal
P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Formic acid	64-18-6	84%
Water	7732-18-5	Remainder

4. FIRST-AID MEASURES

First Aid Measures
24 Hour Emergency Contact: 0800 CHEMCALL (0800 243 622)
New Zealand Poisons Information Centre: 0800 POISON (0800 764 766)
New Zealand Emergency Services: 111

Inhalation
• 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.

Ingestion
• 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.

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.

Eye contact
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.

Advice to Doctor
Treat symptomatically. for corrosives:

BASIC TREATMENT

. Establish a patent airway with suction where necessary.
. Watch for signs of respiratory insufficiency and assist ventilation as necessary.
. Administer oxygen by non-rebreather mask at 10 to 15 l/min.
. Monitor and treat, where necessary, for pulmonary oedema .

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
• Water spray or fog.
• Foam.
• Dry chemical powder.
• BCF (where regulations permit).

Specific Hazards Arising From The Chemical
May emit corrosive fumes.
BEWARE: Empty solvent, paint, lacquer and flammable liquid drums present a severe explosion hazard if cut by flame torch or welded. Even when thoroughly cleaned or reconditioned the drum seams may retain sufficient solvent to generate an explosive atmosphere in the drum.

Hazchem Code
2X

Decomposition Temperature
Not Available

Precautions in connection with Fire
Personal Protective Equipment:
Gas tight chemical resistant suit.

Other Information
FIRE INCOMPATIBILITY
• Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal
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 Protection
Personal Protective Equipment advice is contained in Section 8 of the MSDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling
• DO NOT allow clothing wet with material to stay in contact with skin.
• 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.

Storage Regulations
• 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.

Recommended Materials
• Lined metal can, lined metal pail/ can.
• Plastic pail.
• Polyliner drum.
• Packing as recommended by manufacturer. 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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
Source: New Zealand Workplace Exposure Standards (WES)

Material	TWA	STEL
Formic Acid	5ppm, 93.4 mg/m3	10 ppm, 19 mg/m3

The following materials had no OELs on our records
• water: CAS:7732- 18- 5

Appropriate Engineering Controls
Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

Personal Protective Equipment
RESPIRATOR
Type AE-P 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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form
Liquid

Appearance
Colourless to yellow liquid with pungent, penetrating odour; mixes with water.

Colour
Colourlesss to yellow

Odour
Pungent

Decomposition Temperature
Not Available

Melting Point
Not Available

Boiling Point
107.3°C

Solubility in Water
Miscible

Specific Gravity
1.195 @20°C

pH
pH (1% solution): Not Available
pH (as supplied): Not Available

Vapour Pressure
2.4 @ 20°C

Vapour Density (Air=1)
Not Available

Evaporation Rate
Not Available

Viscosity
1.4 cSt@ 20°C

Volatile Component
Not Available

Flash Point
65°C

Auto-Ignition Temperature
500°C

Explosion Limit - Upper
47.6

Explosion Limit - Lower
14.9

Molecular Weight
Molecular Weight

10. STABILITY AND REACTIVITY

Chemical Stability
• Presence of incompatible materials.
• Product is considered stable.
• Hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

11. TOXICOLOGICAL INFORMATION

Ingestion
Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

Eye
- The material can produce severe chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
- When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

Chronic Effects
Repeated or prolonged exposure to corrosives 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.

Other Information
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.

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Formic Acid	HIGH	-	HIGH	HIGH
Water	LOW	-	LOW	HIGH

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

U.N. Number
3412

Transport hazard class(es)
8

Sub.Risk
None

Packing Group
II

Hazchem Code
2X

UN Number (Sea Transport)
3412

UN Number (Road Transport)
3412

UN Number (Air Transport, ICAO)
3412

IATA/ICAO Proper Shipping Name
Formic Acid with not less than 10% but not more than 85% acid by mass

IATA/ICAO Hazard Class
8

IATA/ICAO Packing Group
II

IATA/ICAO Sub Risk
None

LIMITED QUANTITY - Max Net Quantity/Pkge
1 L

IMDG UN No
3412

IMDG Hazard Class
8

IMDG Pack. Group
II

IMDG Subsidiary Risk
None

IMDG EMS
F-A , S

15. REGULATORY INFORMATION

Regulatory information
Regulations for ingredients

Formic acid (CAS: 64-18-6) is found on the following regulatory lists;
"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 - Pesticides","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Veterinary Medicines","New Zealand Inventory of Chemicals (NZIoC)","New Zealand Workplace Exposure Standards (WES)","OECD Representative List of High Production Volume (HPV) Chemicals"

Water (CAS: 7732-18-5) is found on the following regulatory lists;
"IMO IBC Code Chapter 18: List of products to which the Code does not apply","New Zealand Inventory of Chemicals (NZIoC)", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Formic Acid 84%

HSNO Approval Number
HSR002492

Other Information
Specific advice on controls required for materials used in New Zealand can be found at http://www.epa.govt.nz/hazardous-substances/approvals/Pages/default.aspx.

16. OTHER INFORMATION

Date of preparation or last revision of SDS
13/12/2017

Technical Contact Numbers
24 Hour Emergency Contact: 0800 CHEMCALL (0800 243 622)
New Zealand Poisons Information Centre: 0800 POISON (0800 764 766)
New Zealand Emergency Services: 111

Other Information
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.
This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Jasol NZ cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.
If clarification or further information is needed, the user should contact their Jasol NZ representative or Jasol NZ at the contact details on page 1.
Jasol NZ's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

END OF SDS