



chem-supply

Safety Data Sheet

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Infosafe No™	1CH2U	Issue Date : November 2017	RE-ISSUED by CHEMSUPP
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Product Name : **FORMIC ACID 85 - 99%**

Classified as hazardous

1. Identification

GHS Product Identifier	FORMIC ACID 85 - 99%												
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)												
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia												
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001												
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 and laboratory reagent.												
Other Names	<table border="0"> <tr> <th><u>Name</u></th><th><u>Product Code</u></th></tr> <tr> <td>FORMIC ACID 85% LR</td><td>FL004</td></tr> <tr> <td>FORMIC ACID 85% TR</td><td>FT004</td></tr> <tr> <td>Methanoic Acid</td><td></td></tr> <tr> <td>FORMIC ACID 90% AR</td><td>FA040</td></tr> <tr> <td>FORMIC ACID 98% AR</td><td>FA059</td></tr> </table>	<u>Name</u>	<u>Product Code</u>	FORMIC ACID 85% LR	FL004	FORMIC ACID 85% TR	FT004	Methanoic Acid		FORMIC ACID 90% AR	FA040	FORMIC ACID 98% AR	FA059
<u>Name</u>	<u>Product Code</u>												
FORMIC ACID 85% LR	FL004												
FORMIC ACID 85% TR	FT004												
Methanoic Acid													
FORMIC ACID 90% AR	FA040												
FORMIC ACID 98% AR	FA059												
Other Information	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.												

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Flammable Liquids: Category 3 Skin Corrosion/Irritation: Category 1A Acute Toxicity - Inhalation: Category 3 Acute Toxicity - Oral: Category 4
Signal Word (s)	DANGER
Hazard Statement (s)	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H331 Toxic if inhaled. H314 Causes severe skin burns and eye damage.
Pictogram (s)	Flame, Corrosion, Skull and crossbones



Precautionary statement – Prevention

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.
P260 Do not breathe fume/gas/mist/vapours/spray.
P264 Wash 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.



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Precautionary statement – Response	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. P310 Immediately call a POISON CENTER or doctor/physician. P370+P378 In case of fire: Use dry chemical, CO2 or water spray for extinction.
Precautionary statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool.
Precautionary statement – Disposal	P501 Dispose of contents/container according to local, state and federal regulations.

3. Composition/information on ingredients

Chemical Characterization	Liquid				
Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Formic Acid	64-18-6	85-99 %		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.
Skin	Remove contaminated clothing and wash affected skin with soap and water. If rapid recovery does not occur, obtain medical attention. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Seek medical attention.
Eye contact	Immediately irrigate with copious quantity of water continuously. Eyelids to be held open. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical assistance.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 13 1126 from anywhere in Australia.

5. Fire-fighting measures

Hazards from Combustion Products	Carbon dioxide and carbon monoxide.
Specific Methods	Small fire: Use dry chemical, CO2 or water spray. Large fire: Use water spray, fog or foam - Do NOT use water jets. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.
Specific hazards arising from the chemical	May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire will produce irritating, poisonous and/or corrosive gases.
Hazchem Code	2X
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

6. Accidental release measures

Spills & Disposal	Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 15m. Do NOT touch or walk through spilled product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Cover with plastic sheet to prevent spreading. Absorb spill with earth, sand or other non-combustible
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material and transfer to container.
DO NOT GET WATER INSIDE CONTAINERS.
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.

Personal Precautions

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

7. Handling and storage

Precautions for Safe Handling Handle and open containers with care. When opening containers, avoid inhalation of headspace gases. Use in a well-ventilated area. Prevent formation of aerosols.

Conditions for safe storage, including any incompatibilities Store away from sources of heat or ignition. Store away from oxidizing agents. Store away from combustible materials. Keep containers securely sealed and protected against physical damage.

Corrosiveness Metal containers.

Storage Regulations Refer Australian Standard AS 3780 - 1994 'The Storage and Handling of Corrosive Substances'.

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Formic Acid	19	10	9.4	5	
Other Exposure Information	A time weighted average (TWA) has been established for Formic acid (Safe Work Australia) of 9.4 mg/m3, (5 ppm). The corresponding STEL level is 19 mg/m3, (10 ppm). The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at 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.					
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.					
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.					
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.					
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.					
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.					
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.					
Body Protection	Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.					
Hygiene Measures	Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping.					

9. Physical and chemical properties

Form Liquid

Appearance Colourless, fuming liquid.



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Odour	Pungent, penetrating odour
Melting Point	8 °C
Boiling Point	101 °C
Solubility in Water	Miscible in all proportions.
Solubility in Organic Solvents	Miscible with alcohol, ether and glycerol.
Specific Gravity	(99%) 1.220 (90%) 1.2
Vapour Pressure	35 mm Hg @ 20 °C
Vapour Density (Air=1)	1.6 (air=1)
Odour Threshold	20 ppm
Partition Coefficient: log Pow: -2.1 (23°C)	
n-octanol/water	
Flash Point	48 °C c.c.
Flammability	Combustible.
Auto-Ignition Temperature	480 °C
Flammable Limits - Lower	12 %
Flammable Limits - Upper	38 %
Molecular Weight	46.03

10. Stability and reactivity

Reactivity	Vapours/air mixtures are explosive at intense heating.
Chemical Stability	Stable under normal use conditons. Heat and light sensitive.
Conditions to Avoid	Heating
Incompatible Materials	Oxidisers, bases, reducing agents.
Possibility of hazardous reactions	Risk of explosion with sodium hypochlorite, hydrogen peroxide, organic nitro compounds and furfuryl alcohol. May generate dangerous fumes when in contact with strong oxidising agents, sulfuric acid, nitric acid, alkalines, nitrates, phosphorus oxides and non-metallic oxides.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Toxicology Information	This substance should be treated with great care.
Ingestion	Cause severe burns to the mouth, throat and stomach.
Inhalation	Inhalation of vapours can cause severe irritation of nose, throat, and upper respiratory tract. Inhalation of higher concentrations may cause central nervous system effects and respiratory/lung damage.
Skin	Causes severe burns. Symptoms of redness and pain can occur.
Eye	Causes severe burns and eye damage. Risk of blindness.
Carcinogenicity	Not listed in the IARC Monographs.
Reproductive Toxicity	No evidence of reproductive effects.
Chronic Effects	Prolonged or repeated exposure to low concentrations may cause skin irritation and burns. Prolonged or repeated exposure may cause liver and kidney damage.

12. Ecological information

Ecological Information	No ecology data available for this product.
Ecotoxicity	Harmful effect due to pH shift.



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Bioaccumulative Potential No bioaccumulation is to be expected (log P(o/w) <1.0).

Environmental Protection Do not discharge to the environment.

13. Disposal considerations

Disposal Considerations Dispose of according to relevant local, state and federal government regulations.

Container Disposal Treat as the product itself.

14. Transport information

Transport Information Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following: Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity.

U.N. Number 1779

UN proper shipping name FORMIC ACID

Transport hazard class(es) 8

Sub.Risk 3

Hazchem Code 2X

Packing Group II

EPG Number 8A1

IERG Number 36

15. Regulatory information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule S5

Hazard Category Corrosive

16. Other Information

Literature References Commonwealth Department of Health and Aged Care, 'Standard for the Uniform Scheduling of Drugs and Poisons No. 18', Commonwealth of Australia, Canberra 2002.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley & Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Dangerous Goods Code 6th. Ed.', AGPS, Canberra, 1998.
South Australia Government, 'Approved Code of Practice for the Labelling of Workplace Substances', 1995.
Standards Australia, 'SAA/SNZ HB76:1997 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 1997.
Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]', AusInfo, Canberra 1999.
Worksafe Australia, 'List of Designated Hazardous Substances [NOHSC:10005(1999)]', AusInfo, Canberra 1999.
Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]', AGPS, Canberra 1994.
Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]', AusInfo, Canberra 1995.
Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & CH₂ O₂

Structural Formula

...End Of MSDS...

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