



Infosafe No™	1CH06	Issue Date : January 2019	RE-ISSUED by CHEMSUPP
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Product Name : **CHLOROFORM**

Classified as hazardous

1. Identification

GHS Product Identifier	CHLOROFORM	
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	
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)	
Recommended use of the chemical and restrictions on use	Solvent for many oils, tars, resins, rubbers and a wide range of organic chemicals, chlorofluorocarbon refrigerants, fluorocarbon plastics, anesthetic, fumigant, insecticide, analytical reagent and laboratory reagent.	
Other Names	Name	Product Code
	CHLOROFORM AR, stabilised with amylene Trichloromethane, Formyl trichloride	CA038

Other Information

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	Acute Toxicity - Oral: Category 4 Skin Corrosion/Irritation: Category 2 Acute Toxicity - Inhalation: Category 3 Carcinogenicity: Category 2 Specific target organ toxicity - Repeated Exposure Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Pictogram (s)	Health hazard, Skull and crossbones

**Precautionary statement – Prevention**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/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.
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.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.



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Precautionary statement – Storage	P362 Take off contaminated clothing and wash before reuse.
	P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Precautionary statement – Disposal	P311 Call a POISON CENTER or doctor/physician.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313 If eye irritation persists: Get medical advice/attention.
	P308+P313 IF exposed or concerned: Get medical advice/attention.
	P403+P233 Store in a well-ventilated place. Keep container tightly closed.
	P405 Store locked up.
	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization	Liquid										
Information on Composition	Derived from the reaction of chlorinated lime with acetone, acetaldehyde or ethanol or by the chlorination of methane.										
Ingredients	<table border="1"> <thead> <tr> <th><u>Name</u></th> <th><u>CAS</u></th> <th><u>Proportion</u></th> <th><u>Hazard Symbol</u></th> <th><u>Risk Phrase</u></th> </tr> </thead> <tbody> <tr> <td>Chloroform</td> <td>67-66-3</td> <td>100 %</td> <td></td> <td></td> </tr> </tbody> </table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>	Chloroform	67-66-3	100 %		
<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>							
Chloroform	67-66-3	100 %									
Other Information	Chloroform normally contains a stabilizer such as ethanol (0.5-1%), methanol (0.2%), amylene, or alkylphenols. Chloroform contains small amounts of impurities such as carbon tetrachloride, bromodichloromethane, dichloromethane and dichloroethylene.										

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. Consult a physician.
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	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Suitable extinguishing media	Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Hazards from Combustion Products	Non-combustible. May evolve toxic fumes in fire (i.e. hydrogen chloride).
Specific hazards arising from the chemical	Slight fire hazard when exposed to high heat: otherwise practically not flammable.
Hazchem Code	2Z
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	Do not touch or walk through this 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 minimize spreading. Absorb with earth, sand or other non-combustible material and transfer to container. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
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Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Use personal protective equipment listed in 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.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage

Precautions for Safe Handling	Do not breathe vapour. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. When using do not eat or drink. Only use in well-ventilated areas. Wash hands and face thoroughly after working with material. Wear suitable protective clothing.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well ventilated area and out of direct sunlight. Store away from strong bases, oxidising agents, metals, ketone solvents and aluminium. Keep containers securely sealed.
Corrosiveness	May corrode some forms of plastics, rubber, and coatings.
Storage Regulations	Refer Australian Standard AS 4452 - 1997 'The storage and handling of toxic substances'.

8. Exposure controls/personal protection

Exposure Controls, Personal Protection	Odour threshold is above TWA.				
Occupational exposure limit values	<u>Name</u>	<u>STEL</u>		<u>TWA</u>	
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>
	Chloroform	-	-	10	2
Other Exposure Information	'SK' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur. These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace 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. A time weighted average (TWA) has been established for Chloroform (Safe Work Aust) of 10 mg/m ³ , (2 ppm). 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. These methods should be used in preference to personal protective equipment. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.				
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.				
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	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.				
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.				
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210,				



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Body Protection	Occupational protective footwear - Guide to selection, care and use. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Liquid
Appearance	Heavy, clear, colourless, volatile, highly refractive liquid.
Odour	Characteristic odour.
Melting Point	~ -63.2 °C
Boiling Point	61 - 62 °C
Solubility in Water	Slightly soluble (8 g/L @ 20 °C)
Solubility in Organic Solvents	Miscible with alcohol, ether, benzene, carbon disulfide, carbon tetrachloride and fixed and volatile oils.
Specific Gravity	1.48 (@ 20 °C)
Vapour Pressure	213 hPa (20 °C)
Vapour Density (Air=1)	4.25 (20 °C)
Evaporation Rate	11.6 (butyl acetate = 1)
Coefficient Water/Oil Distr.	log P(o/w): 1.97
Odour Threshold	200-300 ppm
Flammability	Non flammable. Will burn on prolonged exposure to flame or high temperature.
Auto-Ignition Temperature	982 °C
Explosion Properties	Sealed containers may rupture when heated.
Molecular Weight	119.38
Other Information	Critical temperature: 263.4 °C Refractive index: 1.4459 Dipole moment: 1.01 Debye (@ 20 °C) Dielectric constant: 4.8 (@ 20 °C) Saturation concentration: 1027 g/m ³ (@ 20 °C) Heat of evaporation: 263 kJ/kg (@ 61 °C) Taste: Sweet

10. Stability and reactivity

Chemical Stability	Stable if protected from light, heat and air and if stabilized. Chloroform decomposes slowly on prolonged exposure to sunlight or to air forming hydrochloric acid.
Conditions to Avoid	Exposure to moisture. Exposure to direct sunlight. Avoid incompatible materials (strong oxidising agents), moisture and excess heat.
Incompatible Materials	Strong alkalis and alkali metals including aluminium, amides, fluorine, lithium, organic nitro compounds, potassium, sodium, sodium oxides, as well as alkali hydroxides/alcohols, ketone solvents, peroxi compounds. Rubber, various plastics.
Hazardous Decomposition Products	Extremely toxic fumes of carbon oxides, hydrogen chloride, chlorine and phosgene.
Possibility of hazardous reactions	On contact with strong bases a slow reaction occurs due to low solubility of base in chloroform. If methanol (or other cosolvent) is present, reaction may be explosive. Contact with ketone plus strong base may cause violent or explosive reaction. Contact with alkaline metals or aluminium may cause violent or explosive reaction. Contact with strong oxidising agents yields phosgene and chlorine.
Hazardous Polymerization	Will not occur.

11. Toxicological Information



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Ingestion	Harmful if swallowed. May cause gastrointestinal upset. Causes severe burning in mouth and throat, pain in the chest and vomiting. May also cause severe irritation to the mouth, oesophagus and stomach after prolonged exposure. Large quantities may cause symptoms similar to inhalation. Possible hepato-renal (liver and kidney) problems and cardiovascular problems may occur. Symptoms may include nausea, vomiting, perforation with severe abdominal pain and breathing difficulties.
Inhalation	Acts as a relatively potent anesthetic. After inhalation of the vapour, the respiratory tract (mucous membranes) are irritated causing coughing, nausea, vomiting, drowsiness, dizziness and headache. High concentrations can cause central nervous system depression and cardiac arrhythmia. Exposure to higher concentrations may result in confusion, hallucinations, perceptual distortions, delirium, shortness of breath; possibly leading to loss of consciousness and even death. May cause liver injury and blood disorders. Cardiac disorders are aggravated by stress and lack of oxygen.
Skin	Causes skin irritation, resulting in redness and pain. Dehydrates the skin by removing natural oils. If absorbed through the skin may result with toxic effects.
Eye	Vapours cause redness, tearing, pain and a passing sensation of intense burning to the eye. Splashes may cause severe irritation and possible eye damage.
Carcinogenicity	H351 Suspected of causing cancer.
STOT-repeated exposure	H373 May cause damage to organs through prolonged or repeated exposure.
Chronic Effects	Prolonged or repeated exposure to vapours via ingestion or inhalation may cause irreversible damage to the nervous system, the heart, gastro-intestinal, liver and kidneys.

12. Ecological information

Persistence and degradability	When released into the soil or water this material is expected to evaporate quickly. When released into the water, this material is expected to have a half-life between 1 and 10 days. When released into the air, this material is expected to have a half-life greater than 30 days.
Bioaccumulative Potential	No appreciable bioaccumulation potential is to be expected (log P(o/w) <3).
Acute Toxicity - Daphnia	Daphnia magna EC50: 79 mg/l

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Dangerous Goods of Class 6 (Toxic and Infectious Substances) are incompatible in a placard load with any of the following: Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids; and are incompatible with food and food packaging in any quantity.
U.N. Number	1888
UN proper shipping name	CHLOROFORM
Transport hazard class(es)	6.1
Hazchem Code	2Z
Packaging Method	Recommended materials for packaging: Tinned plate. Tinned or plated iron. Prohibited packaging material: Light metals and alloys in the presence of moisture.
Packing Group	III
EPG Number	6A3
IERG Number	34

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

16. Other Information



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Safety Data Sheet

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**Contact
Person/Point**

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