

Chloroform**049-4**

Version 1.1 1

Revision Date 08/24/2017

Print Date 11/06/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Chloroform

SDS Number : 000000011342

Product Use Description : Solvent

Manufacturer or supplier's details : CHEM-SUPPLY Pty Ltd
38-50 Bedford St.
Gillman SA 5013, Australia

For more information call : +61 8 8440 2000
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : Medical: 1-800-498-5701 or +1-303-389-1414
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: **CHEMTREC in Australia: +(61)-290372994**
: (24 hours/day, 7 days/week)

2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Classification of the substance or mixture : Acute toxicity, Category 4, Oral
Acute toxicity, Category 4, Inhalation
Eye irritation, Category 2
Skin irritation, Category 2
Carcinogenicity, Category 2
Reproductive toxicity, Category 2
Specific target organ toxicity - repeated exposure, Category 1,
Liver, Kidney

GHS Label elements, including precautionary statements

Symbol(s) :



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Signal word : Danger

Hazard statements : Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
May cause drowsiness and dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.

Response:

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove victim 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.

IF exposed or concerned: Get medical advice/ attention.

Specific treatment (see supplemental first aid instructions on this label).

Rinse mouth.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CHCl₃
Chemical nature : Substance
CAS-No. : 67-66-3

Hazardous components

Chemical name	CAS-No.	Concentration
Chloroform	67-66-3	<= 100%

4. FIRST AID MEASURES

Inhalation : Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Use oxygen as required, provided a qualified operator is present.
Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Take off contaminated clothing and shoes immediately.
Wash contaminated clothing before re-use.
Call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician.

Ingestion : Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.
Call a physician.

Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry chemical

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- Carbon dioxide (CO₂)
Foam
Cool closed containers exposed to fire with water spray.
- Specific hazards during firefighting : The product is not flammable.
Exposure to decomposition products may be a hazard to health.
In case of fire hazardous decomposition products may be produced such as:
Gaseous hydrogen chloride (HCl).
Phosgene
Chlorine (Cl₂)
Carbon monoxide
Carbon dioxide (CO₂)
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- : HAZCHEM Code: 2Z

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Isolate the affected area. Confine entry into the affected area to those persons properly protected (see Section 8 of MSDS).
Ensure adequate ventilation.
Avoid accumulation of vapours in low areas.
Remove all sources of ignition.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods for cleaning up : Ventilate the area.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Shovel into suitable container for disposal.

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Dispose of absorbed material in accordance with the regulations.

7. HANDLING AND STORAGE**Handling**

Advice on safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : The product is not flammable.
Normal measures for preventive fire protection.
Keep product and empty container away from heat and sources of ignition.
Fire or intense heat may cause violent rupture of packages.
Container hazardous when empty.

Storage

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Protect from physical damage.
Store away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Metals, Aluminium, Magnesium, Strong bases, Strong oxidizing agents, May attack many plastics, rubbers and coatings.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis

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Chloroform	67-66-3	SKIN_DES : Skin designation:	Can be absorbed through the skin.	12 2011	AU NOEL: Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)
		TWA : Time Weighted Average (TWA):	2 ppm 10 mg/m3	12 2011	AU NOEL: Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)
		SKIN_DES : Skin designation:	Can be absorbed through the skin.	08 2005	AU OEL: Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
		TWA : Time Weighted Average (TWA):	2 ppm 10 mg/m3	08 2005	AU OEL: Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Engineering measures

Use with local exhaust ventilation.

Prevent vapour buildup by providing adequate ventilation during and after use.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
Wear a positive-pressure supplied-air respirator.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.

Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.

Eye protection : Do not wear contact lenses.
Wear as appropriate:

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	Safety glasses with side-shields If splashes are likely to occur, wear: Goggles or face shield, giving complete protection to eyes
Skin and body protection	: Wear as appropriate: Solvent-resistant apron Solvent-resistant gloves If splashes are likely to occur, wear: Protective suit
Hygiene measures	: When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. This material has an established AIHA ERPG exposure limit. The current list of ERPG exposure limits can be found at http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf .
Protective measures	: Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid, clear
Colour	: colourless
Odour	: sweet
pH	: Note: Not applicable
Melting point/range	: -64 °C
Boiling point/boiling range	: 62 °C
Flash point	: Note: does not flash
Evaporation rate	: 0.6 Method: Compared to Ether (anhydrous).

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Lower explosion limit : Note: Not applicable

Upper explosion limit : Note: Not applicable

Vapour pressure : 212 hPa
at 20 °C(68 °F)

Vapour density : 4.12
Note: (Air = 1.0)

Density : 1.49 g/cm³ at 20 °C

Water solubility : 8 g/l at 20 °C

Ignition temperature : > 1,000 °C

Molecular weight : 119.37 g/mol

10. STABILITY AND REACTIVITY

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Hazardous polymerization does not occur.

Conditions to avoid : Heat, flames and sparks.
Protect from heat/overheating.
Keep away from direct sunlight.

Incompatible materials to avoid : Metals
Aluminium
Magnesium
Strong bases

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Strong oxidizing agents
May attack many plastics, rubbers and coatings.

Hazardous decomposition products : Gaseous hydrogen chloride (HCl).
Phosgene
Chlorine (Cl₂)
Carbon monoxide
Carbon dioxide (CO₂)

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 908 mg/kg
Species: Rat

Acute inhalation toxicity : LC50: 47.7 mg/l
Exposure time: 4 h
Species: Rat

Acute dermal toxicity : LD50: 20 g/kg
Species: Rabbit

Skin irritation : Species: Rabbit
Result: Mild skin irritation
Exposure time: 24 h

Eye irritation : Species: Rabbit
Result: Moderate eye irritation
Exposure time: 24 h

Repeated dose toxicity : Species: Rat
Application Route: Inhalation
Note: (50 ppm; 7 hours/day, 5 days/week for 6 months)
Causes damage to the following organs: liver, kidneys.

: Species: Rat, male
Application Route: Oral gavage bioassay
Note: Carcinogenicity (70 g/kg for 78 weeks) Kidney tumors

: Species: Mouse, male and female
Application Route: Oral gavage bioassay

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Note: Carcinogenicity (127 g/kg for 92 weeks) Liver tumors

: Species: Rat, male
Application Route: Drinking Water Study
Note: Carcinogenicity (160 mg/kg/d for 104 days) Kidney tumors

: Species: Rat
Application Route: Inhalation
Note: Embryotoxicity at maternally toxic concentrations.

: Species: Rat
Application Route: Inhalation
Note: Teratogenicity at maternally toxic concentrations.

Further information : Note: Contains material which may cause cancer based on animal data.

12. Ecological information**Toxicity**

Toxicity to fish : static test
LC50: 43.8 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

: static test
LC50: 100 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates : static test
LC50: 28.9 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae : LC0: 185 mg/l
Species: Microcystis aeruginosa (blue algae)

: LC0: 1,110 mg/l

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Species: Scenedesmus quadricauda (Green algae)

Toxicity to bacteria : LC0: 125 mg/l
Species: Pseudomonas putida

13. DISPOSAL CONSIDERATIONS

Product : In accordance with local and national regulations.

14. TRANSPORT INFORMATION**ADR**

UN/ID No. : UN 1888
Description of the goods : CHLOROFORM
Class : 6.1
Packing group : III
Classification Code : T1
Hazard Identification Number : 60
Labels : 6.1

ADG_ROAD

UN/ID No. : UN 1888
Description of the goods : CHLOROFORM
Class : 6.1
Packing group : III
Hazard Identification Number : 60
Labels : 6.1

IATA

UN/ID No. : UN 1888
Description of the goods : Chloroform
Class : 6.1
Packing group : III
Labels : 6.1
Packing instruction (cargo aircraft) : 680
Packing instruction (passenger aircraft) : 680

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Packing instruction
(passenger aircraft) : Y680

IMDG

UN/ID No. : UN 1888
Description of the goods : CHLOROFORM
Class : 6.1
Packing group : III
Labels : 6.1
EmS Number 1 : F-A
EmS Number 2 : S-A

Marine pollutant : no

HAZCHEM Code: 2Z

15. REGULATORY INFORMATION**National regulatory information**

Standard for the Uniform : Schedule 6
Scheduling of Medicines and
Poisons

Other international regulations**Notification status**

US. Toxic Substances : On TSCA Inventory
Control Act

Australia. Industrial Chemical : On the inventory, or in compliance with the inventory
(Notification and
Assessment) Act

Canada. Canadian : All components of this product are on the Canadian DSL
Environmental Protection Act
(CEPA). Domestic
Substances List (DSL)

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals : On the inventory, or in compliance with the inventory
Inventory (KECI)

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Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances	: On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: On the inventory, or in compliance with the inventory

16. OTHER INFORMATION**Sources of key data used to compile the Safety Data Sheet:**

1. National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]
2. Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]
3. List of Designated Hazardous Substances [NOHSC:10005(1999)]
4. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]
5. Australian Dangerous Goods Code, No. 6 [National Road Transport Commission]
6. Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP), No. 19 [NDPSC: 2004]
7. National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Prepared by:
Honeywell Performance Materials and Technologies Product Stewardship Group

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End of Safety Data Sheet