

Hazardous, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product Name: **Cyclohexanone**

Recommended Use: Solvent

Supplier: Hilditch Pty Ltd
ABN: 47 005 669 161
Street Address: Level 2 / 24-26 Cubitt Street
Cremorne VIC 3121
Australia
Telephone: (03) 9522 6300
Facsimile: (03) 9804 7711
Email: admin@hilditch.com.au

Emergency Telephone Number: 1800 033 111

2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of Safe Work Australia GHS 7.



Signal Word
Danger

Hazard Classifications

Flammable Liquids - Category 3
Acute Toxicity - Oral - Category 4
Acute Toxicity - Dermal - Category 4
Acute Toxicity - Inhalation - Category 4
Skin Irritation - Category 2
Serious Eye Damage - Category 1

Hazard Statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.

Prevention Precautionary Statements

P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, lighting and all other equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust, fume, gas, mist, vapours or spray.
P264	Wash hands, face and all exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

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P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing including eye/face protection.

Response Precautionary Statements

P101 If medical advice is needed, have product container or label at hand.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep 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/doctor.
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse
P370+P378 In case of fire: Use (insert appropriate media) to extinguish.

Storage Precautionary Statement

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal Precautionary Statement

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Poison Schedule: Not Applicable

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous Goods Class: 3

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Cyclohexanone	108-94-1	>98 % (w/w)
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Skin Contact: This material, or a component of the material, can be absorbed through the skin with resultant toxic effects. If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

Eye Contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor.

PPE for First Aiders: Wear safety shoes, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to Physician: Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Hazchem Code: •3Y

Suitable Extinguishing Media: If material is involved in a fire use alcohol resistant foam or dry agent (carbon dioxide, dry chemical powder).

Specific Hazards: Flammable liquid and vapour. May form flammable vapour mixtures with air. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapour may travel a considerable distance to source of ignition and flash back. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke.

Fire Fighting Further Advice: Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

If safe to do so, shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Dangerous Goods - Initial Emergency Response Guide No: 127

7. HANDLING AND STORAGE

Handling: Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.

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Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Take precautions against static electricity discharges. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Class 3 Flammable Liquid as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Occupational Exposure Limits:

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Cyclohexanone	25	100			Sk

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

'Sk' Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

These 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 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.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator. Vapour heavier than air - prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected. When using this material, use explosive dust handling controls to minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks and flame; prevent the build-up of static charges with appropriate earthing of equipment and personnel.

Personal Protection Equipment: SAFETY SHOES, OVERALLS, GLOVES, CHEMICAL GOGGLES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear safety shoes, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

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Hygiene Measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid
Colour: Clear
Odour: Characteristic

Solubility: Slightly soluble in water
Specific Gravity: 0.94
Relative Vapour Density (air=1): >1
Vapour Pressure: 5 mmHg @ 20 °C
Flash Point (°C): 44.00
Explosion/Flammability Limits: 1.1 - 9.4
Autoignition Temperature (°C): 420
Melting/Freezing Point/Range (°C): -47
Boiling Point/Range (°C): 155
pH: N App
Viscosity: <20.5 mm²/s @ 40 °C
Total VOC (g/Litre): N Av

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: This material is thermally stable when stored and used as directed.

Conditions to Avoid: Elevated temperatures and sources of ignition.

Incompatible Materials: Oxidising agents.

Hazardous Decomposition Products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous Reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Harmful if inhaled. Material may be an irritant to mucous membranes and respiratory tract.

Skin Contact: Harmful in contact with skin. Can be absorbed through the skin with resultant toxic effects. Contact with skin will result in irritation.

Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye Contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Acute Toxicity

Inhalation: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): $10.0 < LC_{50} \leq 20.0$ mg/L for vapours or $1.0 < LC_{50} \leq 5.0$ mg/L for dust and mist.

Skin Contact: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): $1,000 < LD_{50} \leq 2,000$ mg/Kg bw

Ingestion: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): $300 < LD_{50} \leq 2,000$ mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 2 Hazard (reversible effects to skin).

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration Hazard: This material has been classified as not an aspiration hazard.

Specific Target Organ Toxicity (Single Exposure): This material has been classified as not a specific hazard to target organs by a single exposure.

Chronic Toxicity

Mutagenicity: This material has been classified as not a mutagen.

Carcinogenicity: This material has been classified as not a carcinogen.

Reproductive Toxicity (Including via Lactation): This material has been classified as not a reproductive toxicant.

Specific Target Organ Toxicity (Repeat Exposure): This material has been classified as not a specific hazard to target organs by repeat exposure.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute Aquatic Hazard: This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): > 100 mg/L

Long-Term Aquatic Hazard: This material has been classified as not hazardous for chronic aquatic exposure. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or $BCF < 500$ and/or $\log K_{ow} < 4$.

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulative Potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

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If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



UN No: 1915
Dangerous Goods Class: 3
Packing Group: III
Hazchem Code: •3Y
Emergency Response Guide No: 127
Limited Quantities 5 L

Proper Shipping Name: CYCLOHEXANONE

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2), toxic substances (Class 6.1), infectious substances (Class 6.2) or radioactive substances (Class 7). Exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.



UN No: 1915
Dangerous Goods Class: 3
Packing Group: III
Limited Quantities: 5 L
Proper Shipping Name: CYCLOHEXANONE

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.



UN No: 1915
Dangerous Goods Class: 3
Packing Group: III
Limited Quantities: 10 L
Proper Shipping Name: CYCLOHEXANONE

15. REGULATORY INFORMATION

This Material is not Subject to the Following International Agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This Material/Constituent(s) is Covered by the Following Requirements:

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth): Not Applicable.

AICIS Status: Formulations where all components are AICS listed.

16. OTHER INFORMATION

Reason for issue: Minor Text Changes

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.