

- 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.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to environment.
- P280 Wear protective gloves and eye/face protection.

Response Statements:

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
- P330 Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P312 Call a POISON CENTRE or doctor if you feel unwell.
- P361 Remove immediately all contaminated clothing.
- P363 Wash contaminated clothing before re-use.
- 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.
- P370 + P378 In case of fire: Use dry chemical, carbon dioxide or alcohol-resistant foam.

Storage Statement:

- P403 + P235 Store in well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal Statement:

- P501 Dispose of product to a solvent recycling facility or approved landfill in accordance with any local regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Common name	CAS. No	% w/w
Cyclohexanone	108-94-1	≥99

4. FIRST AID MEASURES

Consult the National Poisons Centre, telephone 0800 764 766 [0800 POISON] or a doctor in every case of suspected poisoning. If medical advice is needed, have product container or label at hand.

INGESTION: Rinse mouth with water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor for advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

INHALATION: Move person to fresh air and keep warm and at rest until recovered. Call a Poison Centre or doctor for advice if person feels unwell.

SKIN: Remove immediately all contaminated clothing. Wash affected area with plenty of water followed by soap and water.

EYES: Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do after the first 5 minutes. Continue rinsing for at least 15 minutes. Get medical attention if irritation persists.

NOTES TO PHYSICIAN: Treat symptomatically. If swallowed, consider gastric lavage with perfusion of activated charcoal.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide or alcohol-resistant foam. Use dry chemical powder, carbon dioxide, sand or earth for small fires only. Do NOT use water in a jet.

FIRE & EXPLOSION HAZARDS: Will form explosive mixture with air at temperatures more than 44 °C. In case of fire, avoid breathing smoke. Prevent extinguishing water from getting into the aquatic environment.

SPECIFIC HAZARDS: Vapour is heavier than air, will spread across the ground and distant ignition is possible. Cool fire exposed containers by spraying with water.

FIRE-FIGHTING EQUIPMENT: Wear self-contained breathing apparatus and personal protection clothing.

6. ACCIDENTAL RELEASE MEASURES

SPILLS: Wear personal protective equipment. Avoid contact with skin and eyes.

Flammable liquid. Vapor forms explosive mixture with air. Shut off leak if safe to do so. Remove or isolate ignition sources. Take precautions against static discharge. Bond or ground (earth) all equipment. Use non-sparking tools. Ventilate contaminated area. Isolate hazard area and keep unnecessary and unprotected people away from area. Stay upwind and keep out of low-lying areas.

Contain spill. Avoid run off into drains or sewers. Do not contaminate watercourses or the ground.

For large spills (more than a drum), recover liquid and transfer by mechanical means to labeled salvage tank that can be sealed for recovery or disposal of product. Do not flush away residues with water. Allow residues to evaporate. Remove any contaminated soil and dispose of safely by waste management company.

For small spills, absorb with an appropriate material, e.g. vermiculite, earth or similar, and dispose of waste safely in a labelled sealed container for recovery or disposal.

If contamination of drains, sewers or waterways occurs immediately notify Emergency Services (111).

DISPOSAL: Dispose of contaminated waste or product to a solvent recycling facility or to an approved landfill in accordance with local regulations.

7. HANDLING AND STORAGE

HANDLING: Flammable liquid and vapours. Read label before use. Keep container closed when not in use. Use only in well-ventilated areas. No smoking. Avoid breathing vapors or direct contact with product. Wear personal protective equipment. Wash hands and exposed skin after handling.

Remove ignition sources. Avoid sparks. Electrostatic charge may be generated during pumping with risk of fire. Restrict line viscosity to avoid generation of electrostatic discharge ($\leq 1\text{m/sec}$ until fill pipe submerged to twice its diameter, then $\leq 7\text{ m/sec}$). Take precautions to use bonded or grounded (earthed) equipment. Do not use compressed air for filling, discharging or handling.

STORAGE: Ensure all storage areas have adequate fire-fighting equipment. Store locked up in closed original container in a cool dry well-ventilated place, away from sunlight, ignition sources, heat, incompatible substances, aerosols, other flammables, oxidizing agents, and corrosives, out of reach of children, and away from food, drink and animal foodstuffs. Vapor heavier than air. Take precautions to avoid vapour accumulation in pits and confined spaces.

Recommended materials: No information.

Unsuitable materials: Resins, rubbers, and corrosive to most plastics.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES: A NZ Workplace Exposure Standard (WES) has been set for this substance.

	WES-TWA
Cyclohexanone _{SKIN}	25 ppm (100 mg/m ³)

ENGINEERING CONTROLS: Use only in a well-ventilated area. Wear mask fitted with organic vapour cartridge as minimum for respiratory protection. Recommended respiratory protective equipment is to use positive pressure self-contained air-supplied breathing apparatus.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Wear protective clothing. Safety shoes and boots need to be chemically resistant. Wear appropriate chemical resistant gloves, e.g. isobutylene-isoprene rubber, 4H, polyvinyl alcohol. Wear chemical goggles and/or full face shield to protect eyes. Refer to the relevant AS/NZ standards for appropriate personal protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Water white to light yellow oily liquid
Odour:	Acetone mint odour
Odour threshold:	0.12 – 100 ppm (with detection) 0.12 ppm (smell)
pH:	Neutral
Melting point/Freezing point(°C):	-47
Boiling point/Boiling range (°C):	157
Flash point (°C):	44
Flammability (solid, gas):	Not applicable
Upper/lower flammability limits in air (%v/v):	1.1 - ~9.4
Vapour pressure (mmHg at 20°C):	4
Vapour density (air =1):	3.38
Relative density at 20°C, g/cc:	0.95
Solubility in water:	Slightly soluble (2.3 g/100ml water)
Partition coefficient: n-octanol/water:	0.81
Auto-ignition temperature (°C):	420
Decomposition temperature (°C):	Not available
Kinematic viscosity:	Not available
Volatile organic carbon content:	Not available
Evaporation rate (nBuAc =1):	0.29

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions of storage and use.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, e.g. peroxide, nitric acid.

HAZARDOUS DECOMPOSITION PRODUCTS: Dependent on conditions under which decomposition occurs, harmful compounds (carbon dioxide, carbon monoxide) would be evolved.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which might occur if this product is not handled in the recommended manner.

ACUTE TOXICITY: Toxic if swallowed or absorbed through skin. Inhibits central nervous system. Symptoms include headache, nausea, faintness, drowsiness and confusion.

ASPIRATION HAZARD: Not classified with aspiration hazard. However, if product enters lungs it will cause swelling and bradypnea (abnormally slow breathing). It can cause heart to stop beating and therefore death.

RESPIRATORY IRRITATION: Symptoms may include coughing and shortness of breath. Inhalation of vapour at 50ppm causes throat irritation, 75 ppm concentration for 3 -5 minutes irritates nose and throat.

SKIN CORROSION/IRRITATION: May irritate skin with symptoms of redness, itching and pain. Toxic if absorbed through skin. Prolonged or repeated exposure may cause defatting of the skin which can lead to dermatitis.

SERIOUS EYE DAMAGE/IRRITATION: Serious irritant to eyes. Can cause permanent damage (corneal injury) or blindness at high concentrations.

RESPIRATORY OR SKIN SENSITISATION: Not classified for sensitization effects.

GERM CELL MUTAGENICITY: Not identified with mutagenic properties.

CARCINOGENICITY: Not identified as carcinogen.

REPRODUCTIVE TOXICITY: Not classified with adverse effects on fertility or the unborn child.

SPECIFIC ORGAN TOXICITY (REPEATED AND SINGLE EXPOSURE): May affect kidneys and liver. Causes central nervous system depression resulting in symptoms such as headaches, dizziness and nausea. Continued inhalation may result in unconsciousness and/or death.

NARCOTIC EFFECTS: Not classified for narcotic effects but inhalation may result in drowsiness and dizziness.

Toxicological data:

Oral, mouse LD₅₀ 1400 mg/kg b.w.

Dermal, rabbit LD₅₀ 948 mg/kg b.w.

Additional information: Not available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Product is toxic in the soil environment and harmful to terrestrial vertebrates..

PERSISTENCE AND BIODEGRADABILITY: Expected to rapidly biodegrade.
POTENTIAL FOR BIOACCUMULATION: No information.
MOBILITY IN SOIL: Product is slightly soluble in water. Will slowly evaporate and biodegrade. May contaminate groundwater.
OTHER ADVERSE EFFECTS: Not available.

Ecotoxicological data:

Lactuca sativa (Dicotyledon plant) EC₅₀ (3d) 41.2 mg/L
EC₅₀ (14d) 8.24 mg/L , by calculation

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Recover and recycle product whenever possible. Send clean dry drums to recycling facility or metal scrap reclaimer. Dispose of waste in accordance with Regional Authority or local council bylaws.

SPECIAL PRECAUTIONS: Ensure empty containers are vented and dry. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Do not use empty drums for storing other products.

14. TRANSPORT REGULATIONS

This product is classified as a Dangerous Goods Class 3, packing group III.
Please consult the Land Transport Rule: Dangerous Goods 2005, and NZS 5433:2012 Transport of Dangerous Goods on Land for information.

TRANSPORT INFORMATION:

UN Number: 1915
PROPER SHIPPING NAME: CYCLOHEXANONE
Class: 3
Sub risk: -
Packing Group: III
HAZCHEM: 3Y
Marine Pollutant: No



15. REGULATORY INFORMATION

Hazardous substance according to the HSNO Act 1996 Hazardous Substances (Classification) Notice 2017.

HSNO Substance Approval Code: HSR001112; HEXANONE

Refer to Section 2 for hazardous classifications and to www.epa.govt.nz for Controls and Conditions.

For additional compliance information refer to Worksafe NZ www.worksafe.govt.nz .

16. OTHER INFORMATION

ISSUE DATE: 18 January, 2019
REPLACES: SDS dated August 2006.
REASONS FOR ISSUE: Review of SDS format and product information..

ABBREVIATIONS:

CAS No. Chemical Abstracts Service Number
EPA Environmental Protection Authority
HSNO Hazardous Substances & New Organisms
STEL Short Term Exposure Limit
TWA Time Weighted Average
WES Workplace Exposure Standard

REFERENCES:

Chemical Classification and Information database (CCID); www.epa.govt.nz
Supplier Safety Data Sheets for components

Before using any product, read its label carefully and ensure that you understand its contents. This information is, to the best of our knowledge and belief, accurate and reliable at the date of publication. The information relates only to the specific material designated and may not be valid for such material if it is used in combination with any other material(s). Pacific Sphere Limited disclaims any liability for loss or damage suffered from the use of this information. This does not affect your statutory rights. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for his/her own particular use.

END of SAFETY DATA SHEET