

SAFETY DATA SHEET: CYCLOHEXANONE

MSDS No: TMC-KT-1915

1. IDENTIFICATION OF CHEMICAL PRODUCT

Name of substance: Cyclohexanone **Chemical Family:** Ketone

Product Description: Clear, colourless liquid with an Acetone-like odour

Supplier: **Transmare-Chemie (Singapore) Pte Ltd**
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Telephone: (65) 6262 0122
Facsimile: (65) 6262 0112
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2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Flammable Liquids	Category 3
Acute Toxicity Oral	Category 4
Acute Toxicity - Dermal	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3

GHS Label Elements

Symbols:



Signal Word(s): Danger

GHS Hazards Statement

Physical Hazards:

H226: Flammable Liquid and Vapor

Health Hazards:

H302: Harmful if swallowed
H312: Harmful in contact with skin
H315: Causes skin irritation
H318: Causes serious eye damage
H335: May cause respiratory irritation

Environmental Hazards: N/A

GHS Precautionary Statement:

General:

P101: If medical advice is needed, have a product container or label at hand.
P102: Keep out of reach from children.

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P103:	Read label before use.
Prevention:	
P210:	Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P233:	Keep container tightly closed.
P241:	Use explosion-proof electrical/ventilating/lighting equipment.
P242:	Use only non-sparking tools.
P243:	Take precautionary measures against static discharge.
P261:	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271:	Use only outdoors or in a well-ventilated area.
P280:	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	
P303+P361+P353:	If on Skin (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378:	In case of fire: Use appropriate media for extinction.
P304+P340:	If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312:	Call a POISON CENTER or doctor/physician if you feel unwell.
Storage:	
P403+P235:	Store in a well-ventilated place. Keep cool.
Disposal	
P501:	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.
Other Hazards Which Do Not Result in Classification	
N/A	
Aggravated Medical Condition	
N/A	

3. COMPOSITION/ INFORMATION ON INGREDIENTS **CAS NUMBER: 108-94-1**

Chemical Name	CAS Number	Concentration
Cyclohexane	108-94-1	99%

4. FIRST AID MEASURES

Inhalation, Skin Contact, Eye Contact, Ingestion



Medical attention. Emergency shower.



Emergency eyewash.

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5. FIRE FIGHTING MEASURE
Appropriate Extinguishing Media:

- CO₂
- Alcohol Resistance Foam
- Dry Chemical
- Water Fog

Inappropriate Extinguishing Media:

- Water Jet

6. ACCIDENTAL RELEASE MEASURES

- Eliminate ignition sources. Prevent liquid enters sewers, water sources, low area.
- Spill with sand, earth. Dilute contained spill with water. Dispose recover material conforms to local regulation.
- Keep public away.

7. HANDLING AND STORAGE
Storage/ Transport Temperature:
 Ambient

Loading/ Unloading Temperature:
 Ambient

- Keep container closed, store cool and well-ventilated. Open slowly to control released pressure.
- Keep away from flame, direct sunlight.
- Do not reuse empty containers w/o cleaning. Observe all precautions for empty product containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering Control Measures/Ventilation

Use local exhaust ventilation to control process.
 Provide mechanical ventilation of confined spaces.
 Use explosion-proof ventilation equipment.

Occupational Exposure Limits (OEL) Values

 PEL (USA): Long-term value: 200 mg/m³ ; 50 ppm

 REL (USA): Long-term value: 100 mg/m³ ; 25 ppm

Skin

TLV (USA): Long-term value: 20 ppm; Short-term value: 50 ppm

Skin, BEI, A3

 IOELV (EU): Long-term value: 40.8 mg/m³; 20 ppm; Short-term value: 81.6 mg/m³, 20ppm

Skin

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OELV (Korea): Long-term value: 25 ppm; Short-term value: 50 ppm
Skin

BEI (USA): 80mg/L, Medium: Urine, Time: End of shift at end of workweek, Parameter: 2-cyclohexanediol (With hydrolysis, nonspecific, nonquantitative)

8mg/L, Medium: Urine, Time: End of shift, Parameter: Cyclohexanol (With hydrolysis, nonspecific, nonquantitative)

Personal Protection



Vapor respirator. Gloves. Goggles. Full suit. Footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Form/Color:	Clear / Colourless
Odor:	Characteristic
Flash Point (TCC ASTM D56):	44 °C (Closed cup)
Boiling Point / Range:	157 °C
Specific Gravity:	N/A
Density (15°C):	0.95g/ cm ³
Freezing/Melting Point:	-47 °C
Auto-ignition Temperature:	420 °C
Evaporation Rate (n-Bu Acetate=1):	N/A
Vapor Pressure (20°C):	5 hPa
Solubility in Water (20°C):	23g/l
Explosive Limits (in air):	1.1-9.4vol%
Vapor Density (101.3kPa/air = 1):	N/A
Molecular Weight:	98
Partition Coefficient: n-Octanol/water	0.81 log POW
Odor Threshold:	N/A

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pH:	N/A
Material Hygroscopic:	No

10. STABILITY AND REACTIVITY

Hazardous Polymerization:	No	Conditions to Avoid Polymerization:	N/A
Stability:	Stable	Conditions to Avoid Instability:	N/A
Materials and Conditions to Avoid:	Heating		
Hazardous Decomposition Products:	N/A		

11. TOXICOLOGICAL INFORMATION

Inhalation:	Irritation to respiratory tract. May cause dizziness. May affect central nervous system.
Skin Contact:	Defat, dry skin. Low order of toxicity.
Eye Contact:	May cause discomfort to the eyes. Will not injure eye tissue.
Ingestion:	Minimal toxicity, small amounts may cause bronchopneumonia or pulmonary edema.

12. ECOLOGICAL INFORMATION

Environmental Mobility:	Substance is water-soluble and remains primarily in water.
Environmental Degradability:	Biodegrade rapidly. Removed in wastewater treatment facility.
Ecotoxicity and Bioaccumulation:	Low acute toxicity to aquatic organisms is expected. Long term adverse effects to aquatic organisms are not expected.

13. DISPOSAL CONSIDERATIONS

- Combine with other materials to indicate another route of disposal.
- Recycle, recover, or dispose empty drums through a suitably qualified or licensed contractor.
- Ensure compliance with national and local regulations.

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- NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers.
- Contact local Transmare-Chemie Company supplier or local Authorities for more information.

14. TRANSPORT INFORMATION

	Land	Sea	Air
Class	3	3	3
Packing Group	III	III	III
UN Number	1915	1915	1915
Transport Document Name	Cyclohexanone, Class 3 UN 1915, PG III (44 °C c.c.)	Cyclohexanone, Class 3 UN 1915, PG III (44 °C c.c.)	Cyclohexanone
Others	Hazchem Code: 3Y	Marine Pollutant: No EMS Number: F-E, S-D Risk Label: 3	

15. REGULATORY INFORMATION

Material is hazardous as defined by Specification for hazard communication for hazardous chemicals and dangerous goods (Singapore Standard SS586) Part 2:2014 – Globally Harmonised System of classification and labelling of chemicals – Singapore's adaptations.

16. OTHER INFORMATION
Revision Date on 18th June 2024

This 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. Such information is to the best of Transmare-Chemie Company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.