Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**
· **Trade name: Cyclohexanone**
· **Synonyms:** None
· **CAS Number:**
108-94-1
· **EC/List number:**
203-631-1
· **Index number:**
606-010-00-7
· **Registration number**
01-2119453616-35
(If registration number(s) is provided, please see Registration Number Disclaimer in section 16 for more info on REACH compliance)

· **1.2 Relevant identified uses of the substance or mixture and uses advised against** :
· **Identified/Recommended uses:** Chemical for synthesis

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Taiwan Prosperity Chemical Corporation, Linyuan Factory
No. 9, Gongye 3rd Rd.
Linyuan Dist., Kaohsiung City 832512, Taiwan
Tel: +886-7-643-1247 Fax: +886-7-642-5426
www.ccpgp.com

· **REACH Information:**
Appointed Only Representative (OR):
CCD (Germany) GmbH
Berliner Allee 55
40212 Duesseldorf GERMANY
regulatory_officer@eu.ccp-dcc.com

· **Further information obtainable from:** SDS-info@ccp.com.tw
· **1.4 Emergency telephone number:**
3E Global Incident Response Hotline 24h (Access Code 336088):
Europe: +1 760 476 3962
Great Britain: +44 20 35147487
United Kingdom: +44 8 08 189 0979
Non-Region Specific: +1 760 476 3971
For the emergency telephone number of your local emergency response advisory body, please contact us at reach@ccp.com.tw for the latest SDS in your local language.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture:**
· **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3	H226 Flammable liquid and vapour.
Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H312 Harmful in contact with skin.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Dam. 1	H318 Causes serious eye damage.
STOT SE 3	H335 May cause respiratory irritation.

· **2.2 Label elements:**
· **Labelling according to Regulation (EC) No 1272/2008:**
The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 1)

· **Hazard pictograms:**

GHS02 GHS05 GHS07

· **Signal word:** Danger
· **Hazard statements:**
Flammable liquid and vapour.
Harmful if swallowed or in contact with skin.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
· **Precautionary statements:**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **2.3 Other hazard:** None known.
· **Results of PBT and vPvB assessment**
This substance/all substances present in the mixture does not meet the criteria for persistent, bioaccumulative and toxic or very persistent and very bioaccumulative in accordance with Annex XIII to Regulation (EC) No 1907/2006.
· **Determination of endocrine-disrupting properties**
This substance/all substances present in the mixture is not identified as having endocrine disrupting properties in accordance with the criteria set out in Regulation (EC) No 1907/2006, (EU) 2017/2100 or (EU) 2018/605.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**
108-94-1 cyclohexanone
· **Identification number(s)**
· **EC/List number:** 203-631-1
· **Index number:** 606-010-00-7

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 3)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 2)

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Do not induce vomiting; call for medical help immediately.
Call for a doctor immediately.
· **4.2 Most important symptoms and effects, both acute and delayed:**
Allergic reactions
Irritant effects
Irritation and corrosion
· **4.3 Indication of any immediate medical attention and special treatment needed**
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Carbon dioxide
Dry chemical
Foam
Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture** Combustible.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Use personal protective equipment as required.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.

(Contd. on page 4)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 3)

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
Store in a cool location.
Store in cool, dry place in tightly closed receptacles.

· **Shelf Life:**
· **Further information about storage conditions:** Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
108-94-1 cyclohexanone	
IOELV (EU)	Short-term value: 81.6 mg/m³, 20 ppm Long-term value: 40.8 mg/m³, 10 ppm Skin
AGW (Germany)	Long-term value: 80 mg/m³, 20 ppm 1(I);AGS, EU, H, Y
WEL (Great Britain)	Short-term value: 82 mg/m³, 20 ppm Long-term value: 41 mg/m³, 10 ppm Sk, BMGV

· **Ingredients with biological limit values:**	
108-94-1 cyclohexanone	
BMGV (Great Britain)	2 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: cyclohexanol

· **Information on monitoring procedures:**
Reference should be made to monitoring standards, such as the following: “BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.”

· **8.2 Exposure controls**
Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines.
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

· **Appropriate engineering controls**
Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines.
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
Be sure to clean skin thoroughly after work and before breaks.
Ensure that washing facilities are available at the work place.

(Contd. on page 5)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 4)

· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**

Protective gloves

The selected protective gloves have to satisfy the specifications of standard EN 374 or its equivalent.
Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**

Tightly sealed goggles

Safety glasses with side shields conforming to EN166, ANSI 87.1-2010, or equivalent.

· **Body protection:**
Flame retardant antistatic protective clothing.
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

· **Environmental exposure controls** No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**	
Form:	Liquid
· **Physical state**	Liquid
Colour:	White to Yellow
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	-47 °C
· **Boiling point or initial boiling point and boiling range**	157 °C
· **Flammability (solid, gaseous):**	Not applicable.
· **Lower and upper explosion limit**	
Lower:	1.1 Vol %
Upper:	9.4 Vol % (108-94-1 cyclohexanone)
· **Flash point:**	44 °C (closed cup)
· **Ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.

(Contd. on page 6)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 5)

· **Kinematic viscosity**	
· **Solubility**	
water at 20 °C:	23 g/l
· **Partition coefficient n-octanol/water (log value)**	0.81 log POW
· **Vapour pressure at 20 °C:**	5 hPa (108-94-1 cyclohexanone)
· **Density at 20 °C:**	0.95 g/cm³
Relative density	Not determined.
· **Particle characteristics**	Not applicable.
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity:** When properly handled and stored, no dangerous reaction is known.
· **10.2 Chemical stability:** This product is stable under prescribed use and storage.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
· **10.4 Conditions to avoid:** Heating
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity**
Harmful if swallowed.
Harmful in contact with skin.
Harmful if swallowed, in contact with skin or if inhaled.

· **LD/LC50 values relevant for classification:**

108-94-1 cyclohexanone		
Oral	LD50	1,535 mg/kg (rat)
Dermal	LD50	948 mg/kg (rabbit)
Inhalative	LC50/4 h	8,000 mg/l (rat)

· **Skin corrosion/irritation:**
Causes skin irritation.
Rabbit: irritating to the skin (OECD 404)
· **Serious eye damage/eye irritation:** Causes serious eye damage.
· **Respiratory or skin sensitization:** Sensitising to the respiratory system.
· **Germ Cell Mutagenicity:** Not classified based on available data.
· **Carcinogenicity:** Not classified based on available data.
· **Reproductive Toxicity:** Not classified based on available data.
· **Specific Target Organ Toxicity - Single Exposure (STOT SE):** May cause respiratory irritation.
· **Specific Target Organ Toxicity - Repeated Exposure (STOT RE):**
Not classified based on available data.
· **Aspiration Hazard:** Not classified based on available data.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
Substance is not listed.

(Contd. on page 7)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 6)

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Not classified based on available data.

· **12.2 Persistence and degradability**
Easily biodegradable
Degradation : 90-100% (28d, OECD 301F)

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Any disposal method should also comply with national, regional, provincial, and local laws.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Empty containers may still contain hazardous residue.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1915

· **14.2 UN proper shipping name**
· **ADR, IMDG, IATA** CYCLOHEXANONE solution

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**
· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:** Not applicable.
· **14.6 Special precautions for user** Warning: Flammable liquids.
· **Hazard identification number (Kemler code):** 30
· **EMS Number:** F-E,S-D

(Contd. on page 8)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 7)

· **Stowage Category**	A
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1915 CYCLOHEXANONE SOLUTION, 3, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

· **Date of previous version:** 31.07.2024
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European LIst of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· **Sources**
Most toxicological and eco-toxicological data are obtained from European Chemical Agency (ECHA)'s public dissemination website.

· **Disclaimer for REACH Registration Number(s), if provided:**
Registration number(s) are provided for the CCP Group's compliance and only as a reference for our customer. Having the product's REACH registration numbers alone do not necessarily translate to REACH-

(Contd. on page 9)

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025 Revision: 14.02.2025

Trade name: Cyclohexanone

(Contd. of page 8)

compliance for our customers and/or subsequent downstream users. Per Article 8 of the REACH Regulation, the Only Representative (OR) of each REACH-relevant substance within the product, whether it's CCP Group's OR or its supply chain's OR(s), needs to have up-to-date knowledge on which European Economic Area (EEA) importers AND respective substance's tonnages that are covered by its registration. Otherwise, the respective EEA importers of our product are still subject to REACH registration(s) themselves. It is the responsibility of CCP Group customers, including non-EU customers, to provide the required EEA importers and tonnages in due time. Otherwise, any unreported EEA importer and/or unreported tonnage are NOT covered by the relevant registrations in our supply chain. Furthermore, CCP Group and the OR(s) in our supply chain will not be responsible or financially liable for any damages resulting from our customers' failure to report complete and up-to-date information on EEA importers and/or product's tonnages.

· **General Disclaimers:**

CCP Group recommends that all the users/customers/recipients to study this Safety Data Sheet (SDS) carefully and understand all the data or any potential hazards associated with this product. Please consult with appropriate expert if necessary. The information herein is provided in good faith and is believed to be accurate on the date of issue. No warranty, expressed or implied, is given. It is the customer’s/user’s responsibility to ensure that they are complying with local, regional, state, provincial, and/or national laws in using this product, as regulatory requirement may differ at each level. It is also the customer’s/user’s responsibility to determine the necessary condition required for using this product safely, as actual operating or usage conditions are beyond CCP Group’s control. CCP Group will not be responsible for any SDS obtained from elsewhere other than from CCP Group. If you are unsure whether the SDS you have is current or have obtained the SDS from another source; please contact us to obtain the latest version.