

Safety Data Sheet



久資化工股份有限公司
Chiu Tze Chemical Co., Ltd.

1. Product and Manufacturer Information

Product name : Cyclopentanone
Other names : --
Product use : Intermediate for synthesis of pharmaceuticals and aromas
Manufacturer or Supplier : Chiu Tze Chemical Co., Ltd. Address : No. 818, Baiyu S. Rd., Guanyin Dist., Taoyuan City 328, Taiwan (R.O.C.) Tel : 886-3-4735939
Emergency Tel : 886-3-4735939 Fax : 886-3-4734269

2. Hazard Identification

Hazard Material Category : 1. Flammable liquid: Category 3 2. Skin irritation: Category 2 3. Serious eye damage/eye irritation Category 2
Label Sign :  
Label Statements : Flammable liquid、Warning Sign : Warning Hazard Statements : 1. Flammable liquid and vapor 2. Causes eye irritation Precautionary Statements : 1. Store in a well-ventilated place 2. Keep container tightly closed and cool. 3. Avoid eye contact 4. Away from any source of ignition
Others : Wash face, hands and any exposed skin area thoroughly after handling

3. Composition/ Information on Ingredients

Chemical Name : Cyclopentanone
Synonymous Name : oxo-cyclopentane, ketocyclopentane, adipic ketone
CAS No. : 120-92-3
Percentage of Hazardous Ingredient : 100%



4. First Aid Measures

The First Aid Measures for Different Exposure Routes :

- **Inhalation** : Remove the person from the source of exposure and seek for medical advice
- **Skin Contact** : Flush the affected area with clean water and seek for medical advice
- **Eye Contact** : Flush the affected area with clean water and seek for medical advice
- **Ingestion** : Do not eat anything else, if may, drink some water and seek for medical help immediately

The Worst Symptoms : One may experience headache, stomach upset or fainted

Note to First-aid Personnel : Wear Class C protection equipment

Note to Doctor : No specific antidote. Treatment of exposure should be focused on the control of symptoms of the patient

5. Firefighting Guide

Fire Extinguisher : Carbon Dioxide, Alcohol Resistant Foam, Chemical Arid Powder or Mist

Special occasions may occur during fire :

1. The smoke may contain the original material in addition to varying compositions of toxic or irritating combustion products.
2. The vapors are heavier than air and may travel a long distance and accumulated in low areas. Flashback may occur.

Firefighting Guidelines :

1. Keep people away then isolate fire and deny unnecessary entry
2. Remove the container away from the firing place, if possible
3. Fire at storage areas : Apply auto frame controlling kit or auto-spraying nozzle until the fire has been extinguished
4. Do not use direct water stream which may spread fire
5. Evacuate immediately if tank safety valve sounded or color changed
6. Cool down the tanks or the containers with mist until the fire has been extinguished

Special Equipment for Firefighters : Respirators, protective gloves and fire clothing

6. Act of Leaking

Individual Precaution :

1. Isolate any irrelevant person from the leak until the leakage is cleaned
2. Eliminate all sources of ignition in vicinity of leak to avoid fire or explosion
3. Only trained people are allowed to clean up the leakage

Environmental Precaution :

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1. Stop further leaking if possible
2. Prevent the leakage from entering into soil and sewerage

Cleaning Methods :

1. Reduce vapor by mist and collect the leakage by dirt or sand
2. Gather the pelleted sands into properly labeled containers
3. Contact emergency center for massive leakage

7. Handling and Storage Methods

Handling :

1. Away from any source of ignition
2. Avoid direct contact with eyes, skins and clothing and inhalation
3. Operation needs to be done in a well-ventilated place
4. Smoking is extremely prohibited
5. Containers, even those that have been emptied, can contain vapors; therefore, do not cut, drill, grind, weld or perform similar operations on or near empty containers

Storage :

1. Store away from direct sunlight and minimize sources of ignition such as static build up, heat, spark or flame
2. All sorts of containers have to be tightly closed and labeled all the time
3. Storages have to be away from any incompatible materials
4. Examine the containers for leakage periodically

8. Exposure Controls

Engineering Controls :

1. Use local exhaust ventilation or other engineering controls to maintain airborne levels below requirements
2. If there are no applicable exposure limit requirements, general ventilation should be sufficient for daily uses

Control Parameters

TWA	STEL	CEILING	BEIs
50 ppm	100 ppm		

Individual protection measures :

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements. If there are no applicable exposure limit requirements, wear respiratory protection when one experienced adverse effects such as irritation or discomfort

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Hand protection : Wear chemical protective gloves

Eye protection : Use safety glasses with side shields

Skin and Body protection : Wear clean, body covering clothing

Hygiene measures :

1. After duty one should take off contaminated clothes, if any, clean thoroughly before next use or disposal. Laundry worker must be advised about the hazard
2. No food or smoking at workplace
3. Keep the workplace clean and neat

9. Physical and Chemical Properties

Appearance : Liquid	Odor : Characteristic, strong
Odor threshold : —	Melting point : Not applicable to liquids
pH : 6-8	Boiling point : 130 to 131 °C
Flammability (solid, gas) : Not applicable to liquids-	Flash Point : 30°C
Decomposition temp. : —	Test method : closed cup
Auto-ignition temp. : 430°C	Explosion limit : Non explosive
Vapor pressure : 3.384 mmHg @25°C	Vapor density : (air=1) 2.3
Density : 0.95 (Water=1)	Solubility : Very slightly soluble in cold water
Molecular Weight : 84.12 g/mol	Evaporation Rate : —

10. Stability and Reactivity

Reactivity : Stable under recommended storage conditions
Possibility of hazardous reactions : Prevent contact with air for a long period of time or it may form peroxides.
Conditions to avoid : Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge.
Incompatible materials : Strong Acids, strong bases and strong oxidizers
Hazardous decomposition products : Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to carbon dioxide.

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11. Toxicological Information

Route of exposure : Skin, inhalation, ingestion, eyes
Symptoms : Irritation, headache, dizziness and drowsiness
Routes of Entry: Eye contact. Inhalation. Ingestion. Toxicity to Animals: Acute oral toxicity (LD50): 1180 mg/kg [Rat]. Acute dermal toxicity (LD50): 5000 mg/kg [Rabbit]. Chronic Effects on Humans: Not available. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact. Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

12. Ecological Information

Ecotoxicity : LC50 (Fish) : — EC50 (Aquatic Invertebrates) : — Bio concentration factor (BCF) : —
Persistence and degradability : Photodegradation Half-life (air) : Half-life (Water surface) : - Half-life (Groundwater) : - Half-life (Soil) :-
Bioaccumulative potential : Low
Mobility in soil : Potential for mobility in soil is very high
Other adverse effects : -



13. Disposal Considerations

Waste treatment methods :

1. Incineration
2. Bury
3. Any disposal practice must be in compliance with local regulations and laws

14. Transport Information

UN number : 2245

UN shipping name : Cyclopentanone

Transport hazard class(es) : 3

Packing group : III

Environmental hazards : Not considered environmental hazardous

Special precautions : —

15. Regulatory Information

Applicable regulations :

1. Occupational safety and health act
2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
3. Road and traffic safety rules
4. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
5. Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations
6. Assessment and Classification of Hazardous Chemicals Regulation

16. Other Information

References	1. RTECS Database , TOMES CPS CD , Vol.71 , 2007 2. ChemWatch Database , 2007-1 3. OHS MSDS Database , 2007 4. HSDB Database , TOMES CPS CD , Vol.71 , 2007
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