

Number: 009

Section 1. Product and Company Identification

Product name: Cyclopentanone

Synonyms: A515

Recommended use and Restrictions on use: Manufacture of drug < pesticide <

Intermediates of rubber chemicals

Manufacturer, Importer, or Supplier: Shiny Chemical Industrial Co., Ltd.

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Section 2. Hazards Identification

Classification:

- 1. Flammable liquids, Category 3
- 2. Skin corrosion/irritation, Category 2
- 3. Serious eye damage/eye irritation, Category 2A

Label elements:



Hazard pictograms: Flame, Exclamation mark

Signal word: Warning

Hazard Statements:

- 1. Flammable liquid and vapour.
- 2. Causes skin irritation.
- 3. Causes serious eye irritation.

Precautionary statements:

- 1. Keep container in a well ventilated place.
- 2. Keep away from sources of ignition No Smoking.
- 3. Do not breathe gas/fumes/vapor/mist.
- 4. Wear eye protect or face protect equipment.
- 5. Use only in the well ventilated place.

Other Hazards: -



Section 3. Composition/Information on Ingredients

Pure substance

Chemical Name: Cyclopentatnone

Synonyms: Ketocyclopentane, Adipic ketone, Ketopentamethylene

CAS NO. : 120-92-3

Weight: 100%

Section 4. First Aid Procedures

Description of first aid measures:

- Inhalation:
- 1. Move affected person to breathe fresh air immediately.
- 2. If not breathing, give artificial respiration.
- 3. If heart stop, give CPR.
- 4. Get medical attention.
- Skin contact:
- 1. Remove contaminated clothing and shoes.
- 2. Immediately flush with plenty of water at least 15 minutes.
- 3. Wash gently with non-abrasive soap and water.
- 4. If the stimulus persists, transfer the affected person to hospital for examination and treatment.
- Eye contact:
- 1. Flush eyes with large amounts of warm water at least 20 minutes
- 2. If the stimulus persists, transfer the affected person to hospital for examination and treatment.
- 3. Avoid light if affected person feel pain.
- Ingestion:
- 1. If the victim is about to lose or has lost consciousness or experiences spasm, do not feed any food via mouth.
- 2. Do not induce vomiting.
- 3. If the patient is conscious, give 1 to 2 cups of water or milk to dilute the contents of the stomach.
- 4. Put the victim' s body forward to lower the risk of inhalation when the victim spontaneously vomits.
- 5. Give water to drink.
- 6. Get medical attention immediately.

The most Important Symptoms and Hazardous Effects: -

Protection for emergency personnel: equip appropriate personal protective equipment such as class C and conduct first aid in a safe location.



Notes to Physicians:

- 1. If inhaled, provided oxygen.
- 2. Consider stomach lavage and activated carbon in case of ingestion.

Section 5. Firefighting Measures

Suitable extinguishing media: use water mist, dry chemical, carbon dioxide, alcohol foam.

Special hazards during firefighting:

- 1. Vapors can travel to a source of ignition and flash back.
- 2. Containers may explode due to heat of combustion, and remove the container from the fire if there are safe.
- 3. Vapors may accumulate that cause explosions in low-lying areas and sewers.

Firefighting procedures:

- 1. Cool containers with plenty of water mist until fire stops.
- 2. Evacuate immediately if tank safety valve has been sounded or cause discoloration.
- 3. Remove the container from the fire if there are safe.

Protective equipment for firefighters: Firefighters must wear air respirator, protective gloves, fire fighting clothes.

Section 6. Accidental Release Measures

Personal precautions:

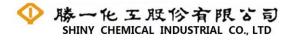
- 1. Restrain personnel from close to spilled areas.
- 2. Ensure cleanup is conducted by trained personnel.
- 3. Wear appropriate personal protection equipment.

Environmental precautions:

- 1. Ventilate area.
- 2. Extinguish or remove all fire sources.
- 3. Notify relevant safety, health, and environmental protection agencies.

Methods for cleaning up:

- 1. Do not touch spillage.
- 2. Prevent entry to sewers or airtight spaces.
- 3. Prevent or reduce spillage under safe circumstances.
- 4. Soak up spills with inert solids, sand, or inert absorbing agents.
- 5. Remove spill with vacuum equipment. Label and store it in an appropriate container with a lid.
- 6. In case of small spill, absorb with an inert material. Contaminated absorbent is as hazardous as spillage; label and store it in an appropriate container with a lid.
- 7. Contaminated absorbing agents have same risk as leaks.



Section 7. Handling and Storage

Handling:

- 1. Operate minimal amount in vented areas to prevent fogging.
- 2. Keep container closed. Use only with adequate ventilation.
- 3. Equip appropriate personal protective equipment.

Storage:

- 1. Store in cool, dry and well ventilated area and avoid sunlight directly.
- 2. Keep away incompatible chemicals and store in the capped and labeled container.
- 3. Keep container tightly closed and avoid impact.
- 4. Limited storage and storage area should be far away from the workplace.

Section 8. Exposure controls

Section 8. Exposure controls					
Engineering controls: local exhaust devices or general ventilation system.					
Control parameters					
TWA	STEL	CEILING	BEIs		
-	-	-	-		

Personal protective equipment:

- Respiratory protection:
- 1. Use SCBA or self-contained air breathing apparatus in emergency response.
- 2. Do not use Air-Purifying Respirators in anoxic environment.
- Hand protection: Use chemical protective gloves made of polyvinyl alcohol.
- Eye protection: Use safety glasses and splash masks.
- Skin and physical protection:
- 1. Use protective clothing which is chemical resistant to this material.
- 2. Safety shoes and boots should also be chemical resistant.

Hygiene measures:

- 1. Remove contaminated clothing quickly as possible after work. Clean clothing before reuse or abandon. Tell cleaning staffs the harmfulness.
- 2. Forbid smoking or eating in workplace.
- 3. After handling this material, wash hands thoroughly.
- 4. Keep workplace clean.

Section 9. Physical and Chemical Properties

Appearance: liquid	Odor: Spicy flavor (like Ether)	
Odor threshold: -	Melting point: -58.2°C	
рН: -	Boiling point/Boiling range: 130.6°C	
Flammability (solid, gas): -	Flash point: 28°C	
Decomposition temperature: -	Test method: close cup	



Auto-ignition temperature: -	Explosion limits: 1.7%	
Vapor pressure: 11.4 mmHg (25°C)	Vapor density: 2.3 (air=1)	
Density: 0.95 (g/cm^3) (25°C · Water = 1)	Solubility: soluble in Ethanol, acetone,	
	ether	
Partition coefficient (n-octanol/water, log	Volatility rate: -	
K _{ow}): 0.24		

Section 10. Stability and Reactivity

Chemical stability: stable under normal conditions.

Possibility of hazardous reactions:

- 1. Contact with strong oxidizer may cause fire or explosions.
- 2. May cause violent explosion in the presence of acid and hydrogen peroxide.

Conditions to avoid: heat and fire.

Materials to avoid: strong oxidizing agents.

Hazardous decomposition products: carbon dioxide, carbon monoxide.

Section 11. Toxicological Information

Exposure Route: skin, inhalation, ingestion, eyes

Symptoms: irritation, burning, headache

Acute toxicity:

• Inhalation: high concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

- Skin: contact will be irritating and burning.
- Eyes: contact will be irritating and burning.
- Ingestion: have moderate toxicity
- LD₅₀ (animal test, entry): 1,950 mg/kg (rat, oral)
- LC₅₀ (animal test, entry): -

Chronic / Long-term toxicity: -

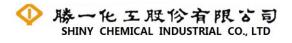
Section 12. Ecological Information

Ecological toxicity:

- 1. LC₅₀ (fish): -
- 2. EC₅₀ (aquatic invertebrates): -
- 3. Bioconcentration factor (BCF): -

Persistence and degradability:

- 1. No Bioconcentration in aquatic organisms.
- 2. When released into the water, this material may evaporate and biodegrade.
- 3. When released into the air, this material may react with photochemically produced hydroxyl radicals and have a half-life of about 2 days.



- Half-life (Air): -
- Half-life (Water surface): -
- Half-life (Groundwater): -
- Half-life (Soil): -

Bioaccumulative potential: -

Mobility in soil: When released into the soil, this material is expected to evaporate and biodegrade.

Other adverse effects: -

Section 13. Disposal Considerations

Waste disposal:

- 1. Refer to relevant local regulations.
- 2. Store unprocessed waste according to storage conditions.
- 3. Use a special incinerator or dispose of in a sanitary landfill.

Section 14. Transport Information

United Nations Number (UN No.): 2245

UN Proper Shipping Name: Cyclopentanone

Transport Hazard classes: 3

Packaging Group: III

Marine pollutant (Yes/No): No

Specific Transport Measures and Precautionary Conditions: -

Section 15. Regulatory Information

Applicable Regulations:

- 1. Occupational Safety and Health Act
- 2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
- 3. Ordinance on Prevention of Organic Solvent Poisoning
- 4. Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace
- 5. Rules on Road Traffic Safety
- 6. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
- 7. Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations

Section 16. Other Information

References	1.	RTECS database, TOMES PLUS CD-Rom, Vol.65, 2005.
	2.	HSDB database, TOMES PLUS CD-Rom, Vol.65, 2005.



	3. Material Safety Data Sheets, Genium Publishing Corporation,	
	1997.	
	4. ChemWatch database, 2005-3.	
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