



Cyclopentanone

1. Product Identification

Synonyms: Ketocyclopentane; Ketopentamethylene; Adipic Ketone

CAS No.: 120-92-3

Molecular Weight: 84.12

Chemical Formula: C₅H₈O

Product Codes: G100

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Cyclopentanone	120-92-3	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Health Rating: 2 - Moderate (Life)

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;
PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. High concentrations have a narcotic effect. Can cause dizziness and lightheadedness. May cause central nervous system depression and unconsciousness.

Ingestion:

Large oral doses may produce gastro-intestinal disturbances. Material is moderately toxic.

Skin Contact:

Causes irritation to skin. Symptoms include redness, itching, and pain. Can cause severe irritation, possible skin burns.

Eye Contact:

Causes irritation, redness, and pain. May cause severe irritation and pain. May cause burns.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Get medical attention immediately. Never give anything by mouth to an unconscious person.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire: Flash point: 26C (79F) CC

Flammable Liquid and Vapor! Contact with strong oxidizers may cause fire.

Explosion:

Sealed containers may rupture when heated. Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Do not allow water runoff to enter sewers or waterways.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless, or water-white liquid.

Odor: Peppermint odor.

Solubility: Slight (0.1-1%)

Specific Gravity: 0.9509 @ 18C/4C

pH: No information found.

% Volatiles by volume @ 21C (70F): 100

Boiling Point: 130.6C (268F)

Melting Point: - 58.2C (-72F)

Vapor Density (Air=1): 2.3

Vapor Pressure (mm Hg): 11.4 @ 25C (77F)

Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Polymerizes easily, especially in presence of acids.

Incompatibilities:

Strong oxidizing agents, strong acids, strong bases. An explosive reaction occurs with hydrogen peroxide + nitric acid and acids.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure. Cyclopentanone Irritation Data: (Std Draize, rabbit) skin, 500 mg, mild; eye, 100 mg, severe.

Ingredient	~NTP Carcinogen~		IARC Category
	Known	Anticipated	
Cyclopentanone (120-92-3)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is expected to readily biodegrade. When released into water, this material may evaporate to a moderate extent. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: CYCLOPENTANONE
Hazard Class: 3
UN/NA: UN2245 Packing Group: III
Information reported for product/size: 500ML
International (Water, I.M.O.)

Proper Shipping Name: CYCLOPENTANONE
Hazard Class: 3.3
UN/NA: UN2245
Packing Group: III
Information reported for product/size: 500ML

International (Air, I.C.A.O.)

Proper Shipping Name: CYCLOPENTANONE
Hazard Class: 3.3
UN/NA: UN2245
Packing Group: III
Information reported for product/size: 500ML

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----
Ingredient TSCA EC Japan Australia

Cyclopentanone (120-92-3) Yes Yes Yes Yes
-----\Chemical Inventory Status - Part 2\-----
-Canada-
Ingredient Korea DSL NDSL Phil.

Cyclopentanone (120-92-3) Yes Yes No Yes
-----\Federal, State & International Regulations - Part 1\-----
-SARA 302- -SARA 313-
Ingredient RQ TPQ List Chemical Catg.

Cyclopentanone (120-92-3) No No No No
-----\Federal, State & International Regulations - Part 2\-----
-RCRA- -TSCA-
Ingredient CERCLA 261.33 8(d)

Cyclopentanone (120-92-3) No No No
Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 3[Y]

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 2 Flammability: 3 Reactivity: 0

Label Hazard Warning:

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Label Precautions:

Keep away from heat, sparks and flame. Keep container closed.

Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling. Avoid breathing dust.

Label First Aid:

If swallowed, get medical attention immediately. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use: Laboratory Reagent.

Revision Information: No Changes.

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