



## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Cyclohexanone, ACS Reagent Grade

**Product Number:** RSOC8600

**Other Identifying Product Numbers:** RSOC8600-1C, RSOC8600-4C, RSOC8600-500C

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Ricca Chemical Company

**Address:** 448 West Fork Drive

Arlington, TX 76012 USA

**Telephone:** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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## SECTION 2: Hazard(s) Identification

### 2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Acute Toxicity - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
Acute Toxicity - Dermal	Category 3	H311	P280, P302+P352, P312, P321, P361, P405, P501
Acute Toxicity - Inhalation	Category 4	H332	P261, P271, P304+P340, P312
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 3	H335, H336	P261, P271, P304+P340, P312, P403+P233, P405, P501
Flammable Liquids	Category 3	H226	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

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**Precautionary Statements:**

Precautionary Number	Precautionary Statement
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or physician if you feel unwell.
P321	Specific treatment (Wash areas of contact with water).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P361	Take off immediately all contaminated clothing and wash it before reuse.
P362	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

**2.4. Hazards not Otherwise Classified or Covered by GHS**

Data not available.

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## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Cyclohexanone	C <sub>6</sub> H <sub>10</sub> O	98.14 g/mol	108-94-1	100.00

## SECTION 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

**Inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Prolonged or repeated exposure may cause dermatitis.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed. Toxic in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Flammable liquid and vapor. Moderately toxic by ingestion and inhalation. Will pass through unbroken skin to cause toxic systemic effects. Wash areas of contact with plenty of water. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Prolonged or repeated exposure may cause dermatitis.

### 4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. Observe for 48 hours for lung effects. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Dry chemical, foam, carbon dioxide

### 5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks and open flames. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

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## 5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## SECTION 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

### 6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Cyclohexanone (108-94-1)	TWA	USA	50 ppm TWA; 200 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cyclohexanone (108-94-1)	TLV-STEL	USA	50 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Cyclohexanone (108-94-1)	TLV-TWA	USA	20 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

### 8.2. Exposure Controls

**Engineering Controls:** Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

**Respiratory Protection:** Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.



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**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn. Chemical resistant gloves. Safety glasses or goggles.

## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

**Appearance:** Colorless or pale yellow liquid

**Physical State:** Liquid

**Odor:** Acetone-like, peppermint-like

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** -28.9°C

**Initial Boiling Point/Range:** 154°C - 156°C

**Flash Point:** 44°C

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** 4.5 hPa at 20°C

**Vapor Density:** 3.38

**Relative Density:** 0.95

**Solubility:** 80 G/L at 20°C

**Partition Coefficient:** 0.86 at 25°C

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

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### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Strong oxidizers (permanganates, peroxides, nitrates, chlorates and perchlorates). Can react with Nitric Acid to form violently explosive materials. Produces explosive peroxides when mixed with Hydrogen Peroxide.

### 10.4. Hazardous Decomposition Products

Will not occur.

## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

#### Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

#### Acute Toxicity - Dermal Exposure:

Toxic in contact with skin. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Specific treatment (Wash areas of contact with water). Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Acute Toxicity - Inhalation Exposure:

Harmful if inhaled. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

#### Acute Toxicity - Other Information:

LD50, Oral, Rat: 1800 mg/kg, details of toxic effects not reported other than lethal dose value. Investigated as a tumorigen, mutagen and reproductive effector.

#### Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

#### Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

#### Respiratory Sensitization:

Not applicable.

#### Skin Sensitization:

Not applicable.



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**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Not applicable.

**Specific Target Organ Toxicity from Single Exposure:**

May cause respiratory irritation. May cause drowsiness or dizziness. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific Target Organ Toxicity from Repeated Exposure:**

Not applicable.

**Aspiration Hazard:**

Not applicable.

**Additional Toxicology Information:**

Data not available.

### SECTION 12: Ecological Information

**12.1. Ecotoxicity**

Not applicable.

**12.2. Persistence and Degradability**

Data not available.

**12.3. Bioaccumulative Potential**

Data not available.

**12.4. Mobility in Soil**

Data not available.

**12.5. Other Adverse Ecological Effects**

Data not available.

### SECTION 13: Disposal Considerations

**13.1. Waste Treatment Methods**

Data not available.





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### SECTION 14: Transportation Information

#### 14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

**Sizes:** 1 L, 4 L, 500 mL

**UN Number:** UN1915

**Proper Shipping Name:** Cyclohexanone

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



#### 14.2. Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 1 L, 4 L, 500 mL

**UN Number:** UN1915

**Proper Shipping Name:** Cyclohexanone

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



#### 14.3 Transportation of Dangerous Goods (TDG, Canada)

**Sizes:** 1 L, 4 L, 500 mL

**UN Number:** UN1915

**Proper Shipping Name:** CYCLOHEXANONE

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



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## SECTION 15: Regulatory Information

### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Cyclohexanone (CAS # 108-94-1): 5000 lb final RQ; 2270 kg final RQ

### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Not listed.

### 15.5. Massachusetts Right-to-Know Substance List

Cyclohexanone (CAS # 108-94-1): Present

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Cyclohexanone (CAS # 108-94-1): Environmental hazard

Cyclohexanone (CAS # 108-94-1): Present

### 15.7. New Jersey Worker and Community Right-to-Know Components

Cyclohexanone (CAS # 108-94-1): sn 0570

### 15.8. California Proposition 65

Not listed.

### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Cyclohexanone (CAS # 108-94-1): Present (DSL)

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Cyclohexanone (CAS # 108-94-1): Present (ACTIVE)

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Cyclohexanone (CAS # 108-94-1): 203-631-1

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## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Flammable liquid and vapor. Harmful if swallowed. Toxic in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.

Keep away from heat, sparks and open flame. No smoking. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

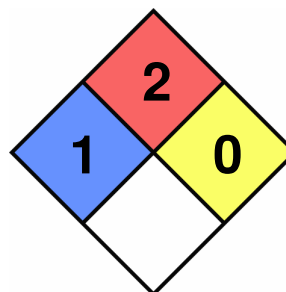
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

**Biohazardous Infectious Materials Hazard Class:** Not Applicable.

### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 1  
**Flammability:** 2  
**Reactivity:** 0  
**Special Hazard:**





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### 16.4. Document Revision

**Last Revision Date:** 2023-10-11

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.