



UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
Solvents & Coatings Materials Division

Acetone



MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE: 08/03/89

Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME: ACETONE

CHEMICAL NAME: Acetone

CHEMICAL FAMILY: Ketones

FORMULA: CH₃COCH₃

MOLECULAR WEIGHT: 58.08

SYNONYMS: Dimethyl Ketone, 2-Propanone, Dimethyl Ketal

CAS # and 67-64-1

CAS NAME: 2-Propanone

II. PHYSICAL DATA

BOILING POINT, 760 mm Hg: 56.29 C (133.32 F)

FREEZING POINT: -96.54 C (-141.77 F)

SPECIFIC GRAVITY(H₂O = 1):
0.7915 @ 20/20 C

VAPOR PRESSURE AT 20°C:
184 mm Hg

VAPOR DENSITY (air = 1):
2.0

SOLUBILITY IN WATER by wt:
Complete

EVAPORATION RATE
(Butyl Acetate = 1): 14.4

APPEARANCE AND ODOR: Clear liquid; sharp, penetrating, non-residual odor.

PERCENT VOLATILES (BY VOLUME): 100

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EMERGENCY PHONE NUMBER: 1-800-UCC-HELP (Number available at all times)

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
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39 Old Ridgebury Road, Danbury, CT. 06817-0001

PRODUCT NAME: ACETONE

III. INGREDIENTS

MATERIAL	%	EXPOSURE LIMITS	HAZARD
Acetone (CAS #67-64-1)	~100	See section V	Harmful if inhaled; flammable; eye irrit
Benzene (CAS #71-43-2)	20 PPM MAX.	See section V	Carcinogen (NTP, IARC)

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 0 F (-18 C) Tag Closed Cup; 4 F (-15 C) Tag Open Cup

FLAMMABLE LIMITS IN AIR,
% by volume: LOWER: 2.15
UPPER: 13.0

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose-type foams by manufacturer's recommended techniques for large fires. Use CO2 or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapors; reignition is possible. Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point. Vapors may settle in low or confined areas, or travel a long distance to an ignition source and flash back explosively.

V. HEALTH HAZARD DATA

TLV AND SOURCE: Acetone, 750 ppm TWA OSHA, ACGIH
1000 ppm STEL OSHA, ACGIH
Values from OSHA 29 CFR 1910.1000 Table Z-1-A & ACGIH 1988-89
Benzene, 1 ppm TWA OSHA
5 ppm STEL OSHA
10 ppm TWA ACGIH
Values from OSHA 29 CFR 1910.1028 & ACGIH 1988-89

EFFECTS OF ACUTE OVEREXPOSURE:

SWALLOWING: Slightly toxic. Causes nausea, vomiting, headache, dizziness and unconsciousness.

SKIN ABSORPTION: No evidence of adverse effects from available information.

INHALATION: Vapors are irritating and may cause a stinging and itching sensation in the eyes, nose and throat, coughing, excessive blinking, tear production, nausea, and possibly vomiting. High vapor concentrations may result in headache, dizziness, incoordination and eventually unconsciousness.

SKIN CONTACT: Brief contact is not irritating. Prolonged or repeated contact may cause defatting and drying of the skin.

EYE CONTACT: Causes severe irritation, seen as marked excess redness and swelling of the conjunctiva, and immediate pain. Injury to the cornea may occur if the eye is not flushed with water immediately.

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EFFECTS OF REPEATED OVEREXPOSURE:

No evidence of adverse effects from available information.

OTHER HEALTH HAZARDS:

None currently known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

Because of its defatting properties, this material may aggravate an existing dermatitis.

ADDITIONAL TOXICITY INFORMATION

Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: Give two glasses of water. Do not induce vomiting. Call a physician.

SKIN: Flush with water.

INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Qualified personnel may give oxygen if breathing is difficult. Call a physician.

EYES: Immediately flush eyes thoroughly with water and continue washing for at least 15 minutes. Obtain medical attention, preferably from an ophthalmologist, urgently.

NOTES TO PHYSICIAN:

Aspirated material may cause severe lung damage and present a significant hazard. Stomach contents should be evacuated quickly in a manner which avoids aspiration. Otherwise, treatment is directed at the control of symptoms and the clinical condition. No specific antidote is known.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (materials to avoid):

Strong oxidizing agents (such as nitric acid) and alkalies.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Burning can produce carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: None

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Extinguish and do not turn on any ignition source until area is determined

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to be free from explosion or fire hazards. Wear suitable protective equipment. Collect large spills for disposal. Flush small spills with water.

WASTE DISPOSAL METHOD: Incinerate in a furnace where permitted under appropriate Federal, State and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Self-contained breathing apparatus in high vapor concentrations.

VENTILATION:

This product should be confined within closed equipment, in which case general (mechanical) room ventilation should be satisfactory. Special, local ventilation may be needed at points where vapors are expected to escape to the workplace air.

PROTECTIVE GLOVES:

Rubber

EYE PROTECTION:

Monogoggles

OTHER PROTECTIVE EQUIPMENT:

Eye bath, safety shower

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DANGER! Extremely flammable.
Harmful if inhaled.
Causes eye irritation.
Aspiration may cause lung damage.
May cause dizziness or drowsiness.

Keep away from heat, sparks, and flame.
Avoid breathing vapor.
Avoid contact with eyes.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS:

WARNING: Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time, and are influenced by pressure changes.

Ignition may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

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Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Acetone	67-64-1	100

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:
None

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Acetone	67-64-1	100

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product contains 20 ppm maximum of benzene. The State of California has found benzene to cause cancer.

MASSACHUSETTS Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:
HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Acetone	67-64-1	100

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:
HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Acetone	67-64-1	100

Toxic Substances Control Act(TSCA) STATUS:

The ingredients of this product are on the TSCA inventory.

CALIFORNIA SCAQMD RULE 443.1 VOC'S:

VOC 790 g/l; Vapor pressure 184 mm Hg @ 20 C

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OTHER REGULATORY INFORMATION:

NEW YORK STATE BULK STORAGE REGULATIONS (GNYSRR Parts 595-599)
This product is covered by GNYSRR for Bulk Storage and Release Reporting and Response. Technical guidance and recommended practices are as follows:

MATERIALS OF CONSTRUCTION

Suitable materials of construction are: Steel, stainless steel, aluminum, baked phenolic lined steel, galvanized steel

Materials not to be used: Copper and copper alloys. Plastics, including polyvinyl chloride and polyethylene.

STORAGE SYSTEM DESIGN

Design should comply with applicable industry, Federal, and local codes for a Class IB Flammable liquid with regards to mechanical, electrical, safety and health components. Should also comply with NYS/DEC Chemical Bulk Storage proposed regulations Parts 589.3 to 589.6 (for existing tanks) or Parts 599.2 and 599.7 (for new or substantially modified tanks).

CONDITIONS FOR STORAGE

Store at normal ambient temperatures.

INSPECTION AND MAINTENANCE

A testing/inspection program which ensures structural integrity and proper system operation should be established. Inspection and maintenance procedures and testing of equipment should comply with NYS/DEC proposed regulations Parts 598.7 to 598.10.

TRANSFER AND UNLOADING

These operations should comply with NYS/DEC proposed regulations, Part 598.5.

NOTE -----

The opinions expressed herein are those of qualified experts within Union Carbide Chemicals and Plastics Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Union Carbide Chemicals and Plastics Company, it is the user's obligation to determine the conditions of safe use of the product.

Date: 02/22/89

Revision Date: 08/09/89

REVISED SECTIONS:

PC: 11212

F NUMBER: C0302A

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section 9: VAPOR IGNITION HAZARD WARNING.