

Safety Data Sheet

HPLC Grade Acetone

SECTION 1: Identification

1.1 Product identifier

Product name	HPLC Grade Acetone
Product number	16304
Brand	CovaChem
Substance name	ACETONE
EC no.	200-662-2
CAS no.	67-64-1
Index no.	606-001-00-8

1.2 Other means of identification

Acetone; HPLC Acetone; HPLC Grade Acetone; HPLC 2-Propanone; Acetone for HPLC

1.3 Recommended use of the chemical and restrictions on use

The intended use is as a mobile phase additive for high performance liquid chromatography (HPLC). This compound may also be used in organic synthesis and in the manufacture of substances. This compound is usually encountered as an aqueous solution.

1.4 Supplier's details

Name	CovaChem, LLC.
Address	6260 East Riverside Blvd Suite 119 Loves Park, IL 61111 United States
Telephone	815-315-1271
Fax	815-315-1272
email	info@covachem.com

1.5 Emergency phone number(s)

PERS Professional Emergency Response Service
Company Code 11814
1-800-633-8253 (U.S. & Canada)
1-801-629-0667 (International)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

- Flammable liquids (chapter 2.6), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram

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Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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/doctor if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam 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/container in accordance with local, state, and federal regulations.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	ACETONE
EC no.	200-662-2
CAS no.	67-64-1
Index no.	606-001-00-8
Formula	C ₃ H ₆ O
Molecular weight	58.08
Other names / synonyms	PYROACETIC ETHER; PYROACETIC ACID; 2-PROPANONE; PROPANONE; METHYL KETONE; BETA-KETOPROPANE; KETONE PROPANE; KETONE, DIMETHYL; DIMETHYL KETONE; DIMETHYLKETAL; DIMETHYLFORMALDEHYDE; ACETONE
Impurities and stabilizing additives	No additional ingredients present known to the supplier, which are classified as hazardous to health or environment, which would require reporting herein.

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Hazardous components

1. ACETONE

Concentration	Not specified
EC no.	200-662-2
CAS no.	67-64-1
Index no.	606-001-00-8

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice

*SKIN CONTACT:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water.

If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

*INHALATION:

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital.

Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

*EYE CONTACT:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center.

Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician.

IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

*INGESTION:

DO NOT INDUCE VOMITING. Volatile chemicals have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems.

If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

*SYMPTOMS:

Symptoms of exposure to this compound may include headache, nausea, vomiting and dizziness [058,421,430]. High concentrations cause narcosis [031,036,043,295]. Irritation of the eyes, nose and throat may occur [346,401,430]. Irritation of the mucous membranes and upper respiratory tract may also occur [269,371]. On prolonged contact, irritation of the skin may occur [043,058]. Other symptoms include central nervous system effects,

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convulsions, kidney and liver injury, unconsciousness and death [058]. Coma has been reported [036]. Fatigue, excitement and bronchial irritation have also been reported [031]. Exposure may cause restlessness, hematemesis, collapse and stupor [151]. It may also cause slight intoxication, central nervous system depression, lassitude, drowsiness, loss of appetite, insomnia, somnolence, loss of strength, shallow respiration, hyperglycemia, weakness of the limbs, lightheadedness, general malaise and hepatorenal lesions [430]. It can cause dryness of the mouth, uncoordinated movements, loss of coordinated speech, rapid and irregular respiration rate, fainting, coughing, inflammation of the stomach and duodenum and giddiness [421]. It can also cause changes in EEG, changes in carbohydrate metabolism, nasal and respiratory system effects, muscle weakness and metabolic changes [043]. Hypoglycemia may result [301].

Skin contact may result in drying of the skin [031,058]. It may also result in mild edema and hyperemia. Prolonged skin contact may lead to defatting of the skin resulting in dermatitis [430]. Erythema also occurs from prolonged contact [031]. Ingestion may cause gastric irritation [036]. Eye contact may result in burns [058]. Severe eye damage may occur [036]. Stinging sensation of the eyes may also occur [099].

Use of alcoholic beverages enhances the toxic effects of this compound. Preexisting eye or skin disorders may be aggravated by exposure [058].

If inhaled

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

In case of skin contact

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

In case of eye contact

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

If swallowed

DO NOT INDUCE VOMITING. Volatile chemicals have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

4.2 Most important symptoms/effects, acute and delayed

Symptoms of exposure to this compound may include headache, nausea, vomiting and dizziness [058,421,430]. High concentrations cause narcosis [031,036,043,295]. Irritation of the eyes, nose and throat may occur [346,

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401,430]. Irritation of the mucous membranes and upper respiratory tract may also occur [269,371]. On prolonged contact, irritation of the skin may occur [043,058]. Other symptoms include central nervous system effects, convulsions, kidney and liver injury, unconsciousness and death [058]. Coma has been reported [036]. Fatigue, excitement and bronchial irritation have also been reported [031]. Exposure may cause restlessness, hematemesis, collapse and stupor [151]. It may also cause slight intoxication, central nervous system depression, lassitude, drowsiness, loss of appetite, insomnia, somnolence, loss of strength, shallow respiration, hyperglycemia, weakness of the limbs, lightheadedness, general malaise and hepatorenal lesions [430]. It can cause dryness of the mouth, uncoordinated movements, loss of coordinated speech, rapid and irregular respiration rate, fainting, coughing, inflammation of the stomach and duodenum and giddiness [421]. It can also cause changes in EEG, changes in carbohydrate metabolism, nasal and respiratory system effects, muscle weakness and metabolic changes [043]. Hypoglycemia may result [301]. Skin contact may result in drying of the skin [031,058]. It may also result in mild edema and hyperemia. Prolonged skin contact may lead to defatting of the skin resulting in dermatitis [430]. Erythema also occurs from prolonged contact [031]. Ingestion may cause gastric irritation [036]. Eye contact may result in burns [058]. Severe eye damage may occur [036]. Stinging sensation of the eyes may also occur [099]. Use of alcoholic beverages enhances the toxic effects of this compound. Preexisting eye or skin disorders may be aggravated by exposure [058].

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

When the temperature is above the flash point, flammable in the presence of an ignition source. Keep away from all heat sources, sparks, and open flames.

5.3 Special protective actions for fire-fighters

Wear a self-contained breathing apparatus when appropriate.

Further information

Carbon oxides may form upon combustion.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

ACUTE/CHRONIC HAZARDS:

This compound is toxic by ingestion and inhalation [025,058,062]. It is an irritant of the eyes, mucous membranes, nose, throat and upper respiratory tract [269,346,371,430]. It rapidly penetrates skin [430]. It is absorbed through the lungs [295,455]. It is narcotic in high concentrations [043,058,062,371]. When heated to decomposition it emits toxic fumes of carbon monoxide, carbon dioxide and unidentified organic compounds in black smoke [058,269].

*MINIMUM PROTECTIVE CLOTHING:

If Tyvek-type disposable protective clothing is not worn during handling of this chemical, wear disposable Tyvek-type sleeves taped to your gloves.

*RECOMMENDED GLOVE MATERIALS:

Permeation Test Results For The Neat (Undiluted) Chemical:

The permeation test results for the neat (undiluted) chemical are given below. The breakthrough times of this chemical are given for each glove type tested. The table is a presentation of actual test results, not specific recommendations or suggestions. Avoid glove types which exhibit breakthrough times of less than the anticipated task time plus an adequate safety factor. If this chemical makes direct contact with your glove, or if a tear, puncture or hole develops, replace them at once.

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Glove Type Model Number Thickness Breakthrough Time
Viton North F-091 0.23 mm 0 min
Butyl rubber North B-174 0.76 mm 480 min
PVA Edmont 25-545 0.25 mm 4 min
Neoprene Edmont 29-870 0.74 mm 30 min
Nitrile Edmont 37-155 0.38 mm 5 min
Latex Ackwell 5-109 0.15 mm 0 min

*RECOMMENDED RESPIRATOR:

When working with this chemical, wear a NIOSH-approved full face chemical cartridge respirator equipped with the appropriate organic vapor cartridges. If that is not available, a half face respirator similarly equipped plus airtight goggles can be substituted. However, please note that half face respirators provide a substantially lower level of protection than do full face respirators.

*OTHER: Not available

*STORAGE PRECAUTIONS:

You should store this chemical in an explosion-proof refrigerator and keep it away from oxidizing materials and acids. Protect from moisture and light. STORE AWAY FROM SOURCES OF IGNITION. If possible, it would be prudent to store this chemical under inert atmosphere.

*SPILLS AND LEAKAGE:

If you spill this chemical, FIRST REMOVE ALL SOURCES OF IGNITION. Then, use absorbent paper to pick up all liquid spill material. Seal the absorbent paper, as well as any of your clothing which may be contaminated, in a vapor-tight plastic bag for eventual disposal. Wash any surfaces you may have contaminated with a soap and water solution. Do not reenter the contaminated area until the Safety Officer (or other responsible person) has verified that the area has been properly cleaned.

*DISPOSAL AND WASTE TREATMENT: Not available

6.2 Environmental precautions

Prevent environmental release. Do not pour down drain or allow to enter waterways or sewers. Prevent further spillage of material when possible.

6.3 Methods and materials for containment and cleaning up

If you should spill this chemical, use absorbent paper to pick up all liquid spill material. Seal the absorbent paper, as well as any of your clothing which may be contaminated, in a vapor-tight plastic bag for eventual disposal. Wash any surfaces you may have contaminated with a soap and water solution. Do not reenter the contaminated area until the Safety Officer (or other responsible person) has verified that the area has been properly cleaned.

Reference to other sections

For disposal information refer to section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid breathing vapors. Wear respiratory protection.

Avoid contact with skin and eyes.

Container may explode under fire conditions. Keep away from ignition sources including sparks, fire, and static electricity.

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7.2 Conditions for safe storage, including any incompatibilities

Store container upright, in a well ventilated, dry location.

Recommended Storage Temperature: Room Temp (+15 - 25 °C)

Specific end use(s)

For laboratory use only. Intended for use as a research laboratory chemical or in the manufacturing of substances.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Acetone (CAS: 67-64-1)

REL (Inhalation): 250 ppm (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

2. Acetone (CAS: 67-64-1)

PEL (Inhalation): 500 ppm, (ST) 750 ppm, (C) 3000 ppm (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

3. Acetone (CAS: 67-64-1)

PEL (Inhalation): 2400 mg/m3 (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

4. Acetone (CAS: 67-64-1)

PEL (Inhalation): 1000 ppm (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls

Use product in a well ventilated location, such as in a fume hood.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Use a face shield (minimum 8 inches) and government tested and approved safety goggles, such as NIOSH (US) or EN 166 (EU).

Skin protection

MINIMUM PROTECTIVE CLOTHING: If Tyvek-type disposable protective clothing is not worn during handling of this chemical, wear disposable Tyvek-type sleeves taped to your gloves. *RECOMMENDED GLOVE MATERIALS: Permeation Test Results For The Neat (Undiluted) Chemical: The permeation test results for the neat (undiluted) chemical are given below. The breakthrough times of this chemical are given for each glove type tested. The table is a presentation of actual test results, not specific recommendations or suggestions. Avoid glove types which exhibit breakthrough times of less than the anticipated task time plus an adequate safety factor. If this chemical makes direct contact with your glove, or if a tear, puncture or hole develops, replace them at once. Glove Type Model Number Thickness Breakthrough Time Viton North F-091 0.23 mm 0 min Butyl rubber North B-174 0.76 mm 480 min PVA Edmont 25-545 0.25 mm 4 min Neoprene Edmont 29-870 0.74 mm 30 min Nitrile Edmont 37-155 0.38 mm 5 min Latex Ackwell 5-109 0.15 mm 0 min

Body protection

Complete chemical protective suit is recommended. The personal protective equipment should be selected based upon the concentration and amount of chemical at work station.

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Respiratory protection

*RECOMMENDED RESPIRATOR: When working with this chemical, wear a NIOSH-approved full face chemical cartridge respirator equipped with the appropriate organic vapor cartridges. If that is not available, a half face respirator similarly equipped plus airtight goggles can be substituted. However, please note that half face respirators provide a substantially lower level of protection than do full face respirators.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Liquid;
Odor	Alcohol like odor
Odor threshold	Data unavailable
pH	Data unavailable
Melting point/freezing point	-94 C
Initial boiling point and boiling range	56
Flash point	-18 C
Evaporation rate	Evaporation rate (butyl acetate = 1): 3.0
Flammability (solid, gas)	Flash Point of -28 °C (-20 F)
Upper/lower flammability limits	Upper explosion Limit: 12.7 % V
Upper/lower explosive limits	Lower explosion Limit: 2 % V
Vapor pressure	43.2 hPa (32.4 mm Hg) at 20 C
Vapor density	Data unavailable
Relative density	0.791 @ 20/4 C
Solubility(ies)	completely soluble
Partition coefficient: n-octanol/water	log P octanol: -0.24
Auto-ignition temperature	465 C
Decomposition temperature	Data unavailable
Viscosity	Data unavailable
Explosive properties	Data unavailable
Oxidizing properties	Data unavailable

SECTION 10: Stability and reactivity

10.1 Reactivity

Data unavailable

10.2 Chemical stability

The chemical is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

Data unavailable

10.4 Conditions to avoid

Avoid excessive heat exposure and proximity to sparks or open flames.

10.5 Incompatible materials

Oxidizing agents, Acid anhydrides, Aluminum, Halogenated compounds

10.6 Hazardous decomposition products

Carbon oxides may form under fire conditions.

SECTION 11: Toxicological information

Information on toxicological effects

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Acute toxicity

LD50 Oral: 5,540 mg/kg (Rat, 96 h)

LC50 Inhalation: 50,100 ppm for 8 h (Rat)

LC50 Dermal: 7,426 mg/kg (Guinea Pig)

Skin corrosion/irritation

Skin: Skin irritation (rabbit)

Serious eye damage/irritation

Eye: Eye irritation (rabbit)

Respiratory or skin sensitization

May cause skin irritation/sensitization and allergic respiratory conditions

Germ cell mutagenicity

Data unavailable

Carcinogenicity

Contains a component of which its carcinogenicity based on its IARC, ACGIH, EPA, and NTP classification is not classifiable

Reproductive toxicity

Data unavailable

STOT-single exposure

Data unavailable

STOT-repeated exposure

Data unavailable

Aspiration hazard

Data unavailable

SECTION 12: Ecological information

Toxicity

Toxicity to Fish: LC50, 5,540 mg/L at 96 h (Oncorhynchus mykiss, ie. Rainbow trout)

Toxicity to Daphnia: EC50, 8,800 mg/L at 48 h (Daphnia magna, ie. Water flea)

Toxicity to Algae: Data unavailable (Algae)

Persistence and degradability

Readily Biodegradable

Bioaccumulative potential

Data unavailable

Mobility in soil

Data unavailable

Results of PBT and vPvB assessment

Data unavailable

Other adverse effects

This chemical may cause environmental hazards. Do not allow material to enter the drain, sewer, or water ways.

SECTION 13: Disposal considerations

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Disposal of the product

Generation of waste should be kept to a minimum when possible. Any waste generated should be recycled when possible. Please dispose any unused or used materials in accordance with applicable national, regional and local laws and regulations.

Disposal of contaminated packaging

Dispose in the same way as unused product.

Waste treatment

This product should be disposed of by a licensed waste management professional. Disposal through incineration with afterburner scrubbing is recommended.

Sewage disposal

Product should not enter the sewer.

SECTION 14: Transport information

DOT (US)

UN Number: 1090

Class: 3

Packing Group: II

Proper Shipping Name: Acetone

Reportable quantity (RQ): 5,000 lbs

Poison inhalation hazard: No

IMDG

UN Number: 1090

Class: 3

Packing Group: II

EMS Number: F-E, S-D

Proper Shipping Name: ACETONE

IATA

UN Number: 1090

Class: 3

Packing Group: II

Proper Shipping Name: Acetone

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No component in this product is subject to the reporting requirements of SARA, Title III, Section 302

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard.

SARA 313 Components

No component in this product is subject to the reporting requirements of SARA, Title III, Section 313

New Jersey Right To Know Components

Common name: Acetone

CAS number: 67-64-1

Massachusetts Right To Know Components

Common name: Acetone

CAS number: 67-64-1

Pennsylvania Right To Know Components

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Common name: Acetone
CAS number: 67-64-1

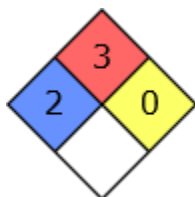
California Prop. 65 Components

This material does not contain any chemicals known to the state of California to cause reproductive harm or birth defects.

HMIS Rating

ACETONE	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

The information represented in this Safety Data Sheet is believed to be correct and is based on the current state of our knowledge. This document or any other document does not represent or suggest any type of warranty or guarantee of the product properties or characteristics of this material. CovaChem, LLC and its affiliates shall not be held liable for any damages that result from contact with the above product or handling this product or any others.