

# Acetone

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Trade name	: Acetone
Chemical name	: acetone, propan-2-one, propanone
CAS-No.	: 67-64-1
Product code	: 08523
Formula	: C <sub>3</sub> H <sub>6</sub> O
Synonyms	: Dimethyl ketone / 2-Propanone / ACETONE / Propan-2-one

#### 1.2. Recommended use and restrictions on use

Recommended use	: Scientific research and development, Use as laboratory reagent, Manufacture of substances
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#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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### SECTION 2: Hazard(s) identification


#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2B	Causes eye irritation

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)	: 
Signal word (GHS US)	: Danger
Hazard statements (GHS US)	: Highly flammable liquid and vapor Causes skin irritation Causes eye irritation
Precautionary statements (GHS US)	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type	: Substance
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Name : Acetone, Glass Distilled, >99.5%  
CAS-No. : 67-64-1

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Eye irritation. Mild eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Store at room temp.
- Storage temperature : Room temperature

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Acetone (67-64-1)	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Acetone
ACGIH TWA (ppm)	250 ppm
ACGIH STEL (ppm)	500 ppm
Remark (ACGIH)	eye irr; CNS impair; BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2018
<b>USA - ACGIH - Biological Exposure Indices</b>	
Biological Exposure Indices (BEI)	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift (nonspecific)
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Acetone
OSHA PEL (TWA) (mg/m <sup>3</sup> )	2400 mg/m <sup>3</sup>
OSHA PEL (TWA) (ppm)	1000 ppm
Regulatory reference (US-OSHA)	OSHA
<b>USA - IDLH - Occupational Exposure Limits</b>	
US IDLH (ppm)	2500 ppm (10% LEL)
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA) (mg/m <sup>3</sup> )	590 mg/m <sup>3</sup>
NIOSH REL TWA [ppm]	250 ppm

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless, volatile liquid.
Color	: clear Colorless
Odor	: characteristic Sweet mint-like
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 56.05 °C (at 1013.25 hPa)
Flash point	: -20 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 233 hPa (at 20 °C)
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.7845 g/cm <sup>3</sup> (at 25 °C)
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: -0.24
Auto-ignition temperature	: 465 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapor.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg
LD50 dermal rabbit	> 15700 mg/kg
LC50 Inhalation - Rat	50100 mg/l (Exposure time: 8 h)
ATE US (oral)	5800 mg/kg body weight
ATE US (vapors)	50100 mg/l/4h
ATE US (dust, mist)	50100 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes eye irritation.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
  
Symptoms/effects : May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Eye irritation. Mild eye irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Acetone (67-64-1)	
EC50 Daphnia 1	10294 – 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	6210 – 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	12600 – 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna)

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

Acetone (67-64-1)	
BCF fish 1	0.69
Partition coefficient n-octanol/water (Log Pow)	-0.24

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Regional legislation (waste) : U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII. U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring. U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents. U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards. U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring. U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics.
- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Additional information : Flammable vapors may accumulate in the container.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN1090 Acetone, 3, II
- UN-No.(DOT) : UN1090
- Proper Shipping Name (DOT) : Acetone
- Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Packing group (DOT) : II - Medium Danger
- Hazard labels (DOT) : 3 - Flammable liquid



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242
- DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
- Emergency Response Guide (ERG) Number : 127
- Other information : No supplementary information available.

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

- Transport document description (IMDG) : UN 1090 ACETONE, 3, II (-20°C c.c.)
- UN-No. (IMDG) : 1090
- Proper Shipping Name (IMDG) : ACETONE
- Class (IMDG) : 3 - Flammable liquids
- Packing group (IMDG) : II - substances presenting medium danger

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Limited quantities (IMDG) : 1 L  
MFAG-No 127

### Air transport

Transport document description (IATA) : UN 1090 Acetone, 3, II  
UN-No. (IATA) : 1090  
Proper Shipping Name (IATA) : Acetone  
Class (IATA) : 3 - Flammable Liquids  
Packing group (IATA) : II - Medium danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Acetone (67-64-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	5000 lb

### 15.2. International regulations

#### CANADA

Acetone (67-64-1)
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

Acetone (67-64-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

Acetone (67-64-1)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

Acetone (67-64-1)	
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

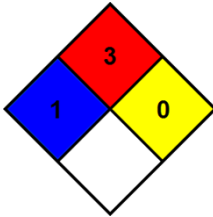
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NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.	
NFPA fire hazard	: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.	
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
Hazard Rating		
Health	: 1 Slight Hazard - Irritation or minor reversible injury possible	
Flammability	: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB IC)	
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.	

SDS US (GHS HazCom 2012)

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