



# Material Safety Data Sheet

## Acetone

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** Acetone

**OTHER/GENERIC NAMES:** 2-Propanone,  $\beta$ -Keptopropane, Dimethylformadlehyde, Dimethyl Ketone, Methyl Ketone, Propanonene, Pyroacetic Ether

**PRODUCT USE:** Solvent

**MANUFACTURER:** Honeywell  
1953 South Harvey Street  
Muskegon, MI 49442

**DISTRIBUTOR:** VWR International  
1310 Goshen Parkway  
West Chester, PA 19380

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm)  
1-800-932-5000

**IN CASE OF EMERGENCY CALL:**  
(24 Hours/Day, 7 Days/Week)  
1-800-424-9300 (USA Only)  
**For Transportation Emergencies:**  
1-800-424-9300 (CHEMTREC - Domestic)  
1-613-996-6666(CANUTEC- Canada)

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Acetone	67-64-1	100

#### Component Information/Information on Non-Hazardous Components

This product is considered to be hazardous according to the criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard) and the Canadian Controlled Product Regulations.

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

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### 3. HAZARDS IDENTIFICATION

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**EMERGENCY OVERVIEW:** This product is a clear, volatile, flammable liquid. Has a sweet, mint-like odor. Highly flammable. Vapours may form explosive mixtures with air. The product causes irritation of eyes, skin and mucous membranes. Repeated exposure may cause skin dryness or cracking. Harmful by inhalation. Harmful: may cause lung damage if swallowed. Causes headache, drowsiness or other effects to the central nervous system. Do not allow product to contact skin, eyes and clothing. Do not breathe vapours.

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#### POTENTIAL HEALTH HAZARDS

**SKIN:** Irritating to skin. Skin absorption may cause toxic effects similar to those described for inhalation. Repeated or extended contact may cause erythema (reddening of the skin) or dermatitis, resulting from a defatting action on tissue.

**EYES:** Irritating to eyes. Symptoms include itching, burning, redness and tearing.

**INHALATION:** Harmful by inhalation. Vapours may cause drowsiness and dizziness. Inhalation of high vapour concentrations can cause CNS-depression and narcosis. Severe overexposure may produce more serious symptoms, including coma and risk of kidney damage.

**INGESTION:** Harmful: may cause lung damage if swallowed. Ingestion causes burning sensation in the mouth, throat and stomach and gastrointestinal disturbances. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision.

**DELAYED EFFECTS:** Repeated or prolonged exposure may cause damage to the liver and kidney.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing respiratory diseases, liver or kidney dysfunctions, or central nervous system disorders may be aggravated by exposure.

**HMIS Ratings: Health: 2 Fire: 3 Physical Hazard: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

**Ingredients found on one of the OSHA designated carcinogen lists are listed below.**

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen by ACGIH, IARC, NTP or OSHA.			

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#### 4. FIRST AID MEASURES

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**SKIN:** Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Obtain medical attention.

**EYES:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**INHALATION:** Move to fresh air in case of accidental inhalation of vapours. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, provided a qualified operator is available. Call a physician immediately.



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**INGESTION:** DO NOT induce vomiting. Immediate medical attention is required. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

**ADVICE TO PHYSICIAN:** Treat symptomatically.

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#### 5. FIRE FIGHTING MEASURES

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##### FLAMMABLE PROPERTIES

**FLASH POINT:** -4°F (-20°C)

**FLASH POINT METHOD:** Closed Cup

**AUTOIGNITION TEMPERATURE:** 869°F (465°C)

**UPPER FLAME LIMIT (volume % in air):** 13

**LOWER FLAME LIMIT (volume % in air):** 2.5

**FLAME PROPAGATION RATE (solids):** Not applicable

**OSHA FLAMMABILITY CLASS:** Class 1B Flammable Liquid

##### **EXTINGUISHING MEDIA:**

Use alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>) or dry chemical.

##### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Highly flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may travel along the ground to some distant source of ignition and flash back.

Hazardous combustion products may include carbon monoxide, carbon dioxide (CO<sub>2</sub>).

##### **SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Water may be ineffective. Fire-fighters should wear self-contained, NIOSH-approved breathing apparatus and full protective clothing. Fire or intense heat may cause violent rupture of packages. In the event of fire, cool tanks with water spray. Do not use a solid water stream as it may scatter and spread fire. After fire, flush area with water to prevent re-ignition. Do not allow run-off from fire fighting to enter drains or water courses.

**NFPA Ratings: Health: 1 Fire: 3 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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#### 6. ACCIDENTAL RELEASE MEASURES

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##### **IN CASE OF SPILL OR OTHER RELEASE:**

**Containment Procedures:** Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Stop flow of material, if this is without risk.

**Cleanup Procedures:** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. Do not use sparking tools. Do not allow product to enter sewer or waterways.

**Evacuation Procedures:** Keep unnecessary people away. Isolate area.

**Special Procedures:** Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.



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### **Acetone**

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

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#### **7. HANDLING AND STORAGE**

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**NORMAL HANDLING:** (Always wear recommended personal protective equipment.)

Ensure all equipment is electrically grounded before beginning transfer operations. Ensure adequate ventilation. Do not allow product to contact skin, eyes and clothing. Do not breathe vapours. Keep away from fire, sparks and heated surfaces. Keep container tightly closed in a dry and well-ventilated place.

**STORAGE RECOMMENDATIONS:**

Keep in a well-ventilated place. Empty containers may retain product residue including Flammable or Explosive vapours. Do not cut, drill, grind, or weld near full, partially full, or empty product containers. Keep away from heat and sources of ignition. Store away from incompatible substances. Re-open used containers with caution. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in area designed for storage of flammable liquids.

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#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapours or mists generated from the handling of this product. Use product only in closed system. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Local exhaust ventilation is preferred.

#### **PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:**

Wear impervious gloves and flame retardant antistatic protective clothing. Gloves must be inspected prior to use. For leak, spills, or other emergency, use full protective equipment.

**EYE PROTECTION:**

For handling in closed ventilation system, wear safety glasses with side-shields. For leak, spill or other emergency, use chemical goggles and face-shield. Remove contact lenses.

**RESPIRATORY PROTECTION:**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**ADDITIONAL RECOMMENDATIONS:**

Provide eyewash stations and quick-drench shower facilities.



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#### EXPOSURE GUIDELINES

##### Acetone (67-64-1)

ACGIH:	500 ppm TWA 750 ppm STEL
OSHA (Final):	1000 ppm TWA; 2400 mg/m <sup>3</sup> TWA
OSHA (Vacated):	750 ppm TWA; 1800 mg/m <sup>3</sup> TWA 1000 ppm STEL; 2400 mg/m <sup>3</sup> STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors)
NIOSH:	250 ppm TWA; 590 mg/m <sup>3</sup> TWA
Alberta:	750 ppm TWA; 1800 mg/m <sup>3</sup> TWA 1000 ppm STEL; 2400 mg/m <sup>3</sup> STEL
British Columbia:	250 ppm TWA 500 ppm STEL
Manitoba:	750 ppm TWA; 1780 mg/m <sup>3</sup> TWA 1000 ppm STEL; 2375 mg/m <sup>3</sup> STEL
New Brunswick:	500 ppm TWA; 1188 mg/m <sup>3</sup> TWA 750 ppm STEL; 1782 mg/m <sup>3</sup> STEL
Northwest Territories:	1000 ppm TWA; 2370 mg/m <sup>3</sup> TWA 1250 ppm STEL; 2970 mg/m <sup>3</sup> STEL
Nova Scotia:	500 ppm TWA 750 ppm STEL
Nunavut:	1000 ppm TWA; 2370 mg/m <sup>3</sup> TWA 1250 ppm STEL; 2970 mg/m <sup>3</sup> STEL
Ontario:	500 ppm TWAEV 750 ppm STEV
Quebec:	750 ppm TWAEV; 1780 mg/m <sup>3</sup> TWAEV 1000 ppm STEV; 2380 mg/m <sup>3</sup> STEV
Saskatchewan:	1780 mg/m <sup>3</sup> TWA; 750 ppm TWA 2380 mg/m <sup>3</sup> STEL; 1000 ppm STEL
Yukon:	1000 ppm TWA; 2400 mg/m <sup>3</sup> TWA 1250 ppm STEL; 3000 mg/m <sup>3</sup> STEL

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid
PHYSICAL STATE:	Liquid
MOLECULAR WEIGHT:	58.05
CHEMICAL FORMULA:	C <sub>3</sub> H <sub>6</sub> O
ODOR:	Sweet mint-like odor detectable at 20 ppm
SPECIFIC GRAVITY (water = 1.0):	0.79
SOLUBILITY IN WATER (weight %):	Complete
pH:	Not applicable
BOILING POINT:	133°F (56°C)
MELTING POINT:	-138.6°F (-94.8°C)
VAPOUR PRESSURE:	180 mm Hg at 68°F (20°C)



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### Acetone

VAPOUR DENSITY (air = 1.0): 2.0

EVAPORATION RATE: 12

% VOLATILES: 100

FLASH POINT: -4°F (-20°C)

COMPARED TO: Butyl Acetate = 1

(Flash point method and additional flammability data are found in Section 5.)

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#### 10. STABILITY AND REACTIVITY

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##### NORMALLY STABLE? (CONDITIONS TO AVOID):

Stable under recommended storage conditions.

Avoid: Heat, flames and sparks. Incompatible products

##### INCOMPATIBILITIES:

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

##### HAZARDOUS DECOMPOSITION PRODUCTS:

Hazardous decomposition products include carbon monoxide and carbon dioxide (CO<sub>2</sub>).

##### HAZARDOUS POLYMERISATION:

Hazardous polymerisation does not occur.

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#### 11. TOXICOLOGICAL INFORMATION

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Component Analysis - LD50/LC50

##### Acetone (67-64-1)

Rat: LD50 - Route: Inhalation; Dose: 76 mg/L/4H

LD50 - Route: Oral; Dose: 1800 mg/kg

Rabbit: LD50 - Route: Dermal; Dose: 20000 mg/kg

##### IMMEDIATE (ACUTE) EFFECTS:

The product causes irritation of eyes, skin and mucous membranes. Repeated exposure may cause skin dryness or cracking. Harmful by inhalation. Harmful: may cause lung damage if swallowed. Causes headache, drowsiness or other effects to the central nervous system.

##### DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Repeated or prolonged exposure may cause damage to the liver and kidney.

8-Week Inhalation Toxicity Study (rat): 19,000 ppm acetone 5days/week for 8 weeks produced no signs of toxicity other than slightly reduced weight gain compared to controls.

90-Day Oral Toxicity Study (rat): The no-observed effect level is 100 mg/kg/day and the low-observed effect level is 500 mg/kg/day based on increased liver and kidney weights and nephrotoxicity.



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#### OTHER DATA:

This material is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

Ames Assay (S. typhimurium): Negative  
Chromosome Aberrations and Sister Chromatid Exchange Assays: Negative  
Point Mutation in Mouse Lymphoma Cells: Negative  
DNA Cell-binding Assay: Negative

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#### 12. ECOLOGICAL INFORMATION

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Prevent from entering sewer or waterway. This material is not expected to be harmful to aquatic life.

##### Component Analysis - Ecotoxicity - Aquatic Toxicity

##### Acetone (67-64-1)

Test & Species		Conditions
96 Hr LC50 rainbow trout	5540 mg/L	static
96 Hr LC50 fathead minnow	6210 mg/L	flow-through
96 Hr LC50 bluegill	8300 mg/L	static
48 Hr LC50 water flea	0.0039 mg/L	
48 Hr EC50 water flea	12700 mg/L	Static

Accumulation in terrestrial organisms is unlikely. Bioaccumulation is unlikely.

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#### 13. DISPOSAL CONSIDERATIONS

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**WASTE INFORMATION:** Waste Code: U002. This product is a D001 ignitable waste in supplied form. Dispose of as special waste in compliance with local and national regulations. Waste codes should be assigned by the user based on the application for which the product was used. Incineration of waste material in an EPA-approved facility is recommended, allowing a solid, inert residue to form.

**OTHER DISPOSAL CONSIDERATIONS:** Observe all Federal, State, and Local Environmental regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

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#### 14. TRANSPORT INFORMATION

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**US DOT PROPER SHIPPING NAME:** Acetone

**US DOT HAZARD CLASS:** 3

**US DOT ID NUMBER:** UN1090

**PACKING GROUP:** II

**TDG PROPER SHIPPING NAME:** Acetone

**TDG HAZARD CLASS:** 3

**TDG ID NUMBER:** UN1090

**PACKING GROUP:** II



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North American Emergency Response Guide (ERG) Number: 127

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

#### 15. REGULATORY INFORMATION

##### TOXIC SUBSTANCES CONTROL ACT (TSCA)

**TSCA INVENTORY STATUS:** All components are on the U.S. EPA TSCA Inventory List.

**OTHER TSCA ISSUES:** TSCA 4(a) Final Test Rules & Testing Consent Orders.  
TSCA 8(a) Inventory Update Rule. (1998 EPA form U Instructions, App.A)

##### SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPO (lb)</u>
Acetone	5000	None

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

**SECTION 311 HAZARD CLASS:** Immediate. Fire.

##### **SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
No ingredients listed in this section.	

##### STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
Acetone (67-64-1)	100	CA, MA, MN, NJ, PA, RI

##### **ADDITIONAL REGULATORY INFORMATION:**

Acetone is a DEA Listed Precursor and Essential Chemical (List II) subject to certain import, export recordkeeping and reporting requirements. 21 CFR 1310.04 (f),-(g).

Acetone is a Volatile organic compound (VOC) with negligible photochemical reactivity and thus excluded from the definition of volatile organic compounds for the purposes of preparing State implementation plans to attain the national ambient air quality standards for ozone under title I of the Clean Air Act. 40 CFR 51.100(s).





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### Acetone

#### WHMIS CLASSIFICATION (CANADA):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by CPR.

#### WHMIS Classification:

B2- Flammable Liquid

D2B- Toxic Material

#### FOREIGN INVENTORY STATUS:

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC	AUST	PHIL	MITI	KOREA	CHINA
Acetone	67-64-1	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes

#### 16. OTHER INFORMATION

**CURRENT ISSUE DATE:** January 13, 2006

**PREVIOUS ISSUE DATE:** New MSDS.

#### CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

New MSDS.

**OTHER INFORMATION:** As per the OSHA Hazard Communication Standard, 1910.1200, the information contained within this MSDS must be given to those persons using this material. For laboratory use only. Not for food or drug use. Do not store with foodstuffs.

**KEY/LEGEND:** ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DOT = Department of Transportation; DSL = Domestic Substances List; EINECS = European Inventory of Existing Commercial Chemical Substances; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; mg/Kg = milligrams per Kilogram; mg/L = milligrams per Liter; mg/m<sup>3</sup> = milligrams per Cubic Meter; MSHA = Mine Safety and Health Administration; NA = Not Applicable or Not Available; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; SARA = Superfund Amendments and Reauthorization Act; TDG = Transport Dangerous Goods; TSCA = Toxic Substances Control Act; WHMIS = Workplace Hazardous Materials Information System.

End of Sheet #BDH-110