

## Burdick & Jackson

# Material Safety Data Sheet

## Acetone

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Acetone

**OTHER/GENERIC NAMES:** Acetone NF, 2-Propanone, Diethyl Ketone Dimethylketal, Dimethylformaldehyde Pyroacetic acid, Pyroacetic ether

**PRODUCT USE:** Solvent

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

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm Eastern Time)  
1-800-368-0050

**IN CASE OF EMERGENCY CALL:**  
(24 Hours/Day, 7 Days/Week)  
1-800-498-5701 (medical emergencies)  
602-365-4980 (Honeywell - International)  
**For Transportation Emergencies:**  
1-800-424-9300 (CHEMTREC - Domestic)  
703-527-3887 (CHEMTREC - International)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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

Additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may exist in trace amounts at the part-per-million level, and may be listed for local "Right-To-Know" compliance and for other regulatory reasons.

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

Flammable liquid and vapor. Vapor may cause flash fire. Clear, colorless liquid that causes skin, eye and respiratory tract irritation. Harmful if swallowed or inhaled.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** Repeated and/or prolonged exposures to the skin may result in itching, redness, drying, scaling, and peeling.

**EYES:** Vapors are irritating to the eyes. Liquid contact produces intense stinging and burning sensations.

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

#### Acetone

**INHALATION:** Exposure can cause respiratory tract and throat irritation, headaches, shortness of breath and symptoms similar to intoxication. Overexposure can produce severe central nervous system depression, coma and respiratory failure.

**INGESTION:** Ingestion causes a burning sensation in the mouth, throat and stomach followed by nausea and vomiting. Small amounts aspirated into the lungs can cause chemical pneumonia, lung injury and death.

**DELAYED EFFECTS:** None known.

Ingredients that are 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 ingredients listed in this section			

#### 4. FIRST AID MEASURES

**SKIN:** Immediately rinse affected area with plenty of water for 15 minutes. Get medical attention as needed for irritation or any other symptoms. Launder contaminated clothing before reuse.

**EYES:** Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

**INHALATION:** Remove from exposure area to fresh air. If breathing is difficult, give oxygen provided a qualified operator is available. If breathing has stopped, apply artificial respiration. Get immediate medical attention.

**INGESTION:** **Aspiration hazard.** If conscious, rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

**ADVICE TO PHYSICIAN:** **A.** Treatment of severe systemic intoxication (narcosis) from either vapor exposure or ingestion is primarily supportive. Acetone has minimal toxicity on other organ systems and if the victim can be supported through the period of central nervous system depression and respiratory failure, the prognosis is good.

(1) Following recent ingestion, acetone may be removed by gastric lavage. Emesis is not recommended. Activated charcoal is recommended.

(2) Mechanically assisted ventilation may be necessary.

(3) Treat symptomatically and monitor blood glucose.

**B.** Eye exposures usually do not require any specific treatment if liquid acetone is promptly washed out of eyes. If exposure was prolonged, some initial corneal damage may be present. It is advisable for these individuals to be seen by an ophthalmologist.

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

Acetone

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#### **5. FIRE FIGHTING MEASURES**

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##### **FLAMMABLE PROPERTIES**

<b>FLASH POINT:</b>	-4°F (-20°C)
<b>FLASH POINT METHOD:</b>	Closed Cup
<b>AUTOIGNITION TEMPERATURE:</b>	869°F (465°C)
<b>UPPER FLAMMABLE LIMIT (volume % in air):</b>	13% v/v
<b>LOWER FLAMMABLE LIMIT (volume % in air):</b>	2.5%v/v
<b>FLAME PROPAGATION RATE (solids):</b>	Not Applicable
<b>OSHA FLAMMABILITY CLASS:</b>	IB

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

Dry chemical, foam, or carbon dioxide. Water spray may be used to cool fire exposed containers.

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

Extremely flammable. Vapors form explosive mixtures with air. Vapors may spread long distances and ignite. Dangerous when exposed to heat, sparks, flame or oxidants. Sealed containers may rupture when heated.

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

Handle as a very flammable liquid. Water will not be effective in extinguishing a fire. Use water spray to cool fire-exposed containers and to reduce rate of burning, taking care not to spread the fire. Heat will build pressure and rupture closed storage containers. Vapors can travel to distant ignition source and flash back. Wear NIOSH approved self-contained breathing apparatus, and full protective clothing. Do not release runoff from fire control measures into waterways or sewers.

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#### **6. ACCIDENTAL RELEASE MEASURES**

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##### **IN CASES OF SPILL OR OTHER RELEASE: Always wear recommended personal protective equipment.)**

Eliminate sources of ignition. Isolate the spill area. Use non-sparking tools and equipment. Stop leak in a safe and practical manner. (If leak cannot be stopped easily and safely, advise trained emergency response personnel of the situation.) Contain and recover liquid when possible. Absorb small spills with an inert material and place in an approved chemical waste container. For large spills, dike up with inert material and transfer into same container. Do not allow to enter into drains or waterways.

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.)**

Ground containers for transfer of contents. Keep away from heat, sparks, open flames and ignition sources. Do not get in eyes, on skin or clothing. Use with adequate ventilation. No smoking in areas of use. Wash contaminated clothing and protective equipment before reuse.

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

Acetone

#### **STORAGE RECOMMENDATIONS:**

Store in an area designed for storage of flammable liquids. (OSHA 29 CFR 1910.106)  
Protect from temperature extremes and sunlight, and store away from incompatible substances and in accordance with 29 CFR 1910.106. Avoid acids, bases, oxidizers, explosives, nitrogen-fluorine compounds, sulfites, perchlorates, reducing agents and plastics. Empty containers may contain product residue and/or vapors. Label warnings apply to empty containers that have not been cleaned.

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

##### **ENGINEERING CONTROLS:**

Provide general or local exhaust ventilation systems to maintain airborne concentrations below exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

##### **PERSONAL PROTECTIVE EQUIPMENT**

##### **SKIN PROTECTION:**

Wear impervious gloves, boots and clothing suitable to prevent skin contact. Inspect for signs of degradation before each use. Replace as needed. Safety-toed shoes should be worn when handling drums.

##### **EYE PROTECTION:**

Wear safety glasses with non-perforated sideshields for normal handling. Goggles or a full-face shield may be necessary depending on quantity of material and conditions of use. Contact lens should not be worn when working with this chemical.

##### **RESPIRATORY PROTECTION:**

Not required for properly ventilated areas. If there is potential for inhalation of vapor or mist, use an appropriate NIOSH approved respirator. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

The respirator must be selected based on contamination levels and use conditions found in the workplace. Use conditions must not exceed the working limits of the respirator. The respirator must be approved by the National Institute for Occupational Safety and Health (NIOSH) and used in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134.

##### **ADDITIONAL RECOMMENDATIONS:**

Provide eyewash station and safety showers convenient to work areas. Do not eat, drink or smoke in work areas.

##### **EXPOSURE GUIDELINES**

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA Z-1 PEL</u>	<u>OTHER LIMIT</u>
Acetone	500 ppm TWA ( 8-hr. exposure limit) 750 ppm: 15 min. STEL	1000 ppm	NIOSH REL: 250 ppm 10 hr day/40 hr week. NIOSH IDLH: 2500 ppm.

##### **OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:**

None known

**Burdick & Jackson**

**MATERIAL SAFETY DATA SHEET**

Acetone

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE:</b>	Clear, colorless
<b>PHYSICAL STATE:</b>	Liquid
<b>MOLECULAR WEIGHT:</b>	58.08
<b>CHEMICAL FORMULA:</b>	C <sub>3</sub> H <sub>6</sub> O
<b>ODOR:</b>	Sweet mint-like odor detectable at 20 ppm
<b>SPECIFIC GRAVITY (water = 1.0):</b>	0.79
<b>SOLUBILITY IN WATER (weight %):</b>	Complete
<b>pH:</b>	Not Applicable
<b>BOILING POINT:</b>	133°F (56°C)
<b>MELTING POINT:</b>	-94.8°C
<b>VAPOR PRESSURE:</b>	180 mm Hg at 20°C
<b>VAPOR DENSITY (air = 1.0):</b>	2.0
<b>EVAPORATION RATE:</b>	12 <b>COMPARED TO:</b> Butyl Acetate = 1
<b>% VOLATILES:</b>	100
<b>FLASH POINT:</b>	-4°F (-20°C)

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

**10. STABILITY AND REACTIVITY**

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

Product is stable at ambient room temperature in closed containers. Keep away from heat, sparks and flame.

**INCOMPATIBILITIES:**

Acids and oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Complete combustion results in the formation of carbon dioxide and water vapor. Incomplete combustion can produce carbon monoxide and other toxic oxides of carbon.

**HAZARDOUS POLYMERIZATION:**

Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**IMMEDIATE (ACUTE) EFFECTS:**

- Oral (rat) LD<sub>50</sub> = 5800 mg/kg
- Oral (mouse) LD<sub>50</sub> = 3000 mg/kg
- Oral (rabbit) LD<sub>50</sub> = 5340 mg/kg
- Inhalation (rat) LC<sub>50</sub> = 32000 ppm, 4-hr
- Dermal (guinea pig) LD<sub>50</sub> = >9400 µL/kg
- Skin Irritation (rabbit) = Mild, 500 mg/24 hr
- Eye Irritation (rabbit) = moderate to severe, 20 mg, damage generally limited to corneal epithelium and is reversible.

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

#### Acetone

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

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.

#### **OTHER DATA:**

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

### **12. ECOLOGICAL INFORMATION**

96-Hr LC<sub>50</sub> (rainbow trout) = 5,540 mg/L, 12° C

24- to 48-Hr LC<sub>50</sub> (Daphnia magna) = 10 mg/L

96-Hr LC<sub>50</sub> (bluegill sunfish) = 8300 mg/L

Octanol/Water Partition Coefficient: 0.58

Biological Oxygen Demand: 122%, 5 days

Bioconcentration Factor (BCF): 1, suggesting bioconcentration in aquatic organisms is low; calculated using an experimental

log Kow of - 0.24.

### **13. DISPOSAL CONSIDERATIONS**

#### **RCRA**

Is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number (USEPA Hazardous Waste Code) is: U002 and D001

#### **OTHER DISPOSAL CONSIDERATIONS:**

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or RCRA approved waste facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

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.

### **14. TRANSPORT INFORMATION**

**Proper DOT Shipping Description:** Acetone, 3, UN 1090, II.

**Reportable Quantity (RQ):** 5000 lbs (2270 kg).

**Label(s) Required:** Class 3, Flammable Liquid.

**Emergency Response Guidebook (2000 Edition):** Guide No. 127.

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

Acetone

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:** Acetone is listed on TSCA inventory.

**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 TPQ (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>
No ingredients listed in this section.		None.

##### **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).

##### **WHMIS CLASSIFICATION (CANADA):**

Class B, Division 2.

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

## Burdick & Jackson

### MATERIAL SAFETY DATA SHEET

Acetone

#### **FOREIGN INVENTORY STATUS:**

Acetone is listed on the following inventories:

- Australia (AICS)
- Canada (DSL)
- China (IECSC)
- European Union (EINECS)
- Japan (ENCS)
- Korea (KECI)
- Philippine (PICCS)

#### **16. OTHER INFORMATION**

**CURRENT ISSUE DATE:** September 1, 2005

**PREVIOUS ISSUE DATE:** June 21, 2002

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

Amended or modified the following:

- Section 1 Chemical Product and Company Information
- Section 15 Regulatory Information
- Section 16 Other Information

#### **OTHER INFORMATION: NFPA Classification**

Health: 1  
Flammability: 3  
Instability: 0