Acetone

SECTION I - PRODUCT IDENTIFICATION

Product Name: Acetone
Common Synonyms: Dimethyl Ketone; 2-Propanone; Dimethyl Ketal
Chemical Family: Ketones
Formula: (CH₃)₂CO
Formula Wt.: 58.08
CAS No.: 67-64-1
NIOSH/RTECS No.: NL3150000
Product Use: Laboratory Reagent
Product Codes: 5805, 9002, 9007, 9004, 9001, A234, 9125, 9008, 9009, 5356, 9005, 9006, 9010, 5580, 9254, 9015

PRECAUTIONARY LABELING

BAKER SAF-T-DATA\* System

HEALTH FLAMMABILITY REACTIVITY CONTACT

1 3 2 1
SLIGHT SEVERE MODERATE SLIGHT

Laboratory Protective Equipment

GOGGLES LAB COAT VENT HOOD RUBBER GLOVES EXTINGUISHER

U.S. Precautionary Labeling

DANGER!
CAUSES IRRITATION. EXTREMELY FLAMMABLE. HARMFUL IF SWALLOWED OR INHALED.
Keep away from heat, sparks, flame. Avoid contact with eyes, skin, clothing.
Avoid breathing vapor. Keep in tightly closed container. Use with adequate
ventilation. Wash thoroughly after handling. In case of fire, use alcohol
foam, dry chemical, carbon dioxide - water may be ineffective. In case of
spill, soak up with sand or earth. Flush spill area with water.
Acetone

PRECAUTIONARY LABELING (CONTINUED)

International Labeling

Highly flammable.
Keep container in a well-ventilated place. Keep away from sources of ignition
- No smoking. Do not breathe vapor. Take precautionary measures against static
discharges.

SAF-T-DATA* Storage Color Code: Red (flammable)

SECTION II - COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Weight %</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>90-100</td>
<td>750 ppm</td>
<td>750 ppm</td>
</tr>
</tbody>
</table>

SECTION III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point: 56°C (132°F)</td>
<td></td>
</tr>
<tr>
<td>(at 760 mm Hg)</td>
<td></td>
</tr>
<tr>
<td>Melting Point: -95°C (-139°F)</td>
<td></td>
</tr>
<tr>
<td>(at 760 mm Hg)</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity: 0.79</td>
<td></td>
</tr>
<tr>
<td>(H₂O=1)</td>
<td></td>
</tr>
<tr>
<td>Solubility(H₂O): Complete (100%)</td>
<td></td>
</tr>
<tr>
<td>pH: N/A</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold (ppm): 100</td>
<td></td>
</tr>
<tr>
<td>Coefficient Water/Oil Distribution: N/A</td>
<td></td>
</tr>
<tr>
<td>Appearance &amp; Odor: Clear, colorless liquid. Sweet odor.</td>
<td></td>
</tr>
</tbody>
</table>
Acetone

Effective: 03/09/92
Issued: 07/09/93

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup): -18°C (-2°F)  
NFPA 704M Rating: 1-3-0

Autoignition Temperature: 464°C (869°F)

Flammable Limits:  
Upper - 13.0 %  
Lower - 2.6 %

Fire Extinguishing Media  
Use alcohol foam, dry chemical or carbon dioxide. (Water may be ineffective.)

Special Fire-Fighting Procedures  
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards  
Vapors may flow along surfaces to distant ignition sources and flash back. Closed containers exposed to heat may explode. Contact with strong oxidizers may cause fire.

Toxic Gases Produced  
carbon monoxide, carbon dioxide

Explosion Data-Sensitivity to Mechanical Impact  
None identified.

Explosion Data-Sensitivity to Static Discharge  
None identified.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): 1780 mg/m³ (750 ppm)
Short-Term Exposure Limit (STEL): 2375 mg/m³ (1000 ppm)
Permissible Exposure Limit (PEL): 1800 mg/m³ (750 ppm)

Toxicity of components  
Oral Rat LD₅₀ for Acetone  
9750 mg/kg

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

Oral Mouse LD<sub>50</sub> for Acetone: 3000 mg/kg
Intraperitoneal Mouse LD<sub>50</sub> for Acetone: 1297 mg/kg
Skin Rabbit LD<sub>50</sub> for Acetone: 20 g/kg
Carcinogenicity: NTP: No  IARC: No  Z List: No  OSHA Reg: No
Carcinogenicity:
None identified.
Reproductive Effects:
None identified.

Effects of Overexposure:

INHALATION:
irritation of nose and throat, headache, nausea, vomiting, dizziness, narcosis, respiratory failure, low blood pressure, central nervous system depression, coma

SKIN CONTACT:
irritation, prolonged contact may cause dermatitis

EYE CONTACT:
severe irritation, may cause temporary corneal damage

SKIN ABSORPTION:
may occur

INGESTION:
headache, nausea, vomiting, dizziness, gastrointestinal irritation, central nervous system depression, unconsciousness

CHRONIC EFFECTS:
kidney damage, liver damage

Target Organ:
respiratory system, lungs, eyes, skin, central nervous system

Medical Conditions Generally Aggravated by Exposure:
chronic respiratory disease, skin disorders, eye disorders

Primary Routes of Entry:
inhalation, ingestion, eye contact, skin contact

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Acetone

SECTION V - HEALTH HAZARD DATA (CONTINUED)

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If swallowed, if conscious, give large amounts of water. Induce vomiting.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT: In case of contact, flush skin with water.

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

Notes to Physician

Treatment for accidental ingestion of a small amount of Acetone is unnecessary. If a large amount has been ingested, administer an aqueous charcoal slurry.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: Yes Pressure: No Reactivity: No

Extremely Hazardous Substance: No CERCLA Hazardous Substance: Yes Contains Acetone (RQ = 5000 LBS)

SARA 313 Toxic Chemicals: Yes Contains Acetone Generic Class Removed from CFR: 7/1/91

TSCA Inventory: Yes

SECTION VI - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: heat, flame, other sources of ignition

Incompatibles: strong oxidizing agents, strong bases, halogen acids and halogen compounds, caustics, amines and ammonia, chlorine and chlorine compounds, strong acids, esp. sulfuric, nitric, hydrochloric

Decomposition Products: carbon monoxide, carbon dioxide

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SECTION VII - SPILL & DISPOSAL PROCEDURES

Steps to be Taken in the Event of a Spill or Discharge
Wear suitable protective clothing. Shut off ignition sources; no flares, smoking, or flames in area. Stop leak if you can do so without risk. Use water spray to reduce vapors. Take up with sand or other non-combustible absorbent material and place into container for later disposal. Flush area with water.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

Disposal Procedure
Dispose in accordance with all applicable federal, state, and local environmental regulations.

EPA Hazardous Waste Number: U002 (Toxic Waste)

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

Ventilation: Use general or local exhaust ventilation to meet TLV requirements.

Respiratory Protection: Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 5000 ppm, a chemical cartridge respirator with organic vapor cartridge is recommended. Above this level, a self-contained breathing apparatus is recommended.

Eye/Skin Protection: Safety goggles, butyl rubber gloves are recommended.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SNF-T-DATA® Storage Color Code: Red (flammable)

Storage Requirements
Keep container tightly closed. Store in a cool, dry, well-ventilated, flammable liquid storage area. Isolate from incompatible materials.

Special Precautions
Bond and ground containers when transferring liquid.
SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Acetone
Hazard Class: 3.1
UN/NA: UN1090 Reportable Quantity: 5000 LBS. Packaging Group: II
Labels: FLAMMABLE LIQUID
Regulatory References: 49CFR 172.101; 173.119

International (I.M.O.)

Proper Shipping Name: Acetone
Hazard Class: 3.1
UN: UN1090 Marine Pollutants: No Packaging Group: II
Labels: FLAMMABLE LIQUID
Regulatory References: 49CFR 172.12(b); IMDG Code

AIR (I.C.A.O.)

Proper Shipping Name: Acetone
Hazard Class: 3.1 Packaging Group: II
UN: UN1090
Labels: FLAMMABLE LIQUID
Regulatory References: 49CFR 172.101; ICAO== We believe the transportation data and references contained herein to be factual and the opinion of qualified experts. The data is meant as a guide to the overall classification of the product and is not package size specific, nor should it be taken as a warranty or representation for which the company assumes legal responsibility.== The information is offered solely for your consideration, investigation, and verification. Any use of the information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations. See shipper requirements 49CFR 172.3 and employee training 49CFR 173.1.

U.S. Customs Harmonization Number: 29141100008

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Acetone

The information in this Material Safety Data Sheet meets the
requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and
regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the
Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document
is intended only as a guide to the appropriate precautionary handling of
the material by a person trained in, or supervised by a person trained
in, chemical handling. The user is responsible for determining the
precautions and dangers of this chemical for his or her particular
application. Depending on usage, protective clothing including eye and
face guards and respirators must be used to avoid contact with material
or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This
chemical may interact with other substances. Since the potential uses
are so varied, Baker cannot warn of all of the potential dangers of use
or interaction with other chemicals or materials. Baker warrants that
the chemical meets the specifications set forth on the label.

BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD
TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS
FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and
even death, especially if improperly handled or the known dangers of use
are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented
general safety information becomes available, Baker will periodically
revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER 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
(1-800-JTBAKER) for assistance.

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Approved by Quality Assurance Department.