

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name ACETONE, ALDRASORB  
Product Number 539481  
Brand ALDRICH

Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

| Substance Name                | CAS #   | SARA 313 |
|-------------------------------|---------|----------|
| ACETONE, WITH MOLECULAR SIEVE | 67-64-1 | No       |

Formula C3H6O  
Synonyms Aceton (German, Dutch, Polish) \* Acetone  
(ACGIH:OSHA) \* Chevron acetone \*  
Dimethylformaldehyde \* Dimethylketal \* Dimethyl  
ketone \* Ketone, dimethyl \* Ketone propane \*  
beta-Ketopropane \* Methyl ketone \* Propanone \*  
2-Propanone \* Pyroacetic acid \* Pyroacetic ether  
\* RCRA waste number U002

RTECS Number: AL3150000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Irritant.  
Irritating to eyes and skin. Repeated exposure may cause skin  
dryness or cracking. Vapors may cause drowsiness and dizziness.  
Target organ(s): Liver. Kidneys.

## HMIS RATING

HEALTH: 2\*  
FLAMMABILITY: 3  
REACTIVITY: 0

## NFPA RATING

HEALTH: 2  
FLAMMABILITY: 3  
REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

#### INHALATION EXPOSURE

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

#### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

#### EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

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### Section 5 - Fire Fighting Measures

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#### FLAMMABLE HAZARDS

Flammable Hazards: Yes

#### EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

#### FLASH POINT

1 °F -17 °C Method: closed cup

#### EXPLOSION LIMITS

Lower: 2 % Upper: 13 %

#### AUTOIGNITION TEMP

465 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Unsuitable: Water may be effective for cooling, but may not effect extinguishment.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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## Section 7 - Handling and Storage

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### HANDLING

User Exposure: Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

### STORAGE

Suitable: Keep container closed. Keep away from heat, sparks, and open flame. Store in a cool dry place. This product contains a molecular trap to maintain low moisture levels in the solvent.

### SPECIAL REQUIREMENTS

Moisture sensitive.

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## Section 8 - Exposure Controls / PPE

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### ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.  
Hand: Compatible chemical-resistant gloves.  
Eye: Chemical safety goggles.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

### SPECIAL PRECAUTIONS

The material may slowly penetrate protective gloves; therefore in case of spills, discard gloves after use.

### EXPOSURE LIMITS, RTECS

| Country                  | Source            | Type | Value                        |
|--------------------------|-------------------|------|------------------------------|
| USA                      | ACGIH             | STEL | 750 PPM                      |
| USA                      | ACGIH             | TWA  | 500 PPM                      |
| USA                      | MSHA Standard-air | TWA  | 1000 PPM (2400 MG/M3)        |
| USA                      | OSHA.             | PEL  | 8H TWA 1000 PPM (2400 MG/M3) |
| New Zealand OEL          |                   |      |                              |
| Remarks: check ACGIH TLV |                   |      |                              |
| USA                      | NIOSH             | TWA  | 250 PPM                      |

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## Section 9 - Physical/Chemical Properties

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|                       |  |                            |
|-----------------------|--|----------------------------|
| Appearance            | Physical State: Clear liquid<br>Color: Colorless |                            |
| Property              | Value  | At Temperature or Pressure |
| Molecular Weight      | 58.08 AMU  |                            |
| pH                    | N/A  |                            |
| BP/BP Range           | 56 °C  | 760 mmHg                   |
| MP/MP Range           | -94 °C   |                            |
| Freezing Point        | N/A  |                            |
| Vapor Pressure        | 184 mmHg   | 20 °C                      |
| Vapor Density         | 2 g/l  |                            |
| Saturated Vapor Conc. | N/A  |                            |
| SG/Density            | 0.79 g/cm3                                       |                            |
| Bulk Density          | N/A  |                            |
| Odor Threshold        | N/A  |                            |

|                       |                           |                    |
|-----------------------|---------------------------|--------------------|
| Volatile%             | N/A                       |                    |
| VOC Content           | N/A                       |                    |
| Water Content         | N/A                       |                    |
| Solvent Content       | N/A                       |                    |
| Evaporation Rate      | N/A                       |                    |
| Viscosity             | N/A                       |                    |
| Surface Tension       | N/A                       |                    |
| Partition Coefficient | N/A                       |                    |
| Decomposition Temp.   | N/A                       |                    |
| Flash Point           | 1 °F -17 °C               | Method: closed cup |
| Explosion Limits      | Lower: 2 %<br>Upper: 13 % |                    |
| Flammability          | N/A                       |                    |
| Autoignition Temp     | 465 °C                    |                    |
| Refractive Index      | 1.359                     |                    |
| Optical Rotation      | N/A                       |                    |
| Miscellaneous Data    | N/A                       |                    |
| Solubility            | N/A                       |                    |

N/A = not available

## Section 10 - Stability and Reactivity

### STABILITY

Stable: Stable.

Materials to Avoid: Bases, Oxidizing agents, Reducing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

## Section 11 - Toxicological Information

### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

### SENSITIZATION

Sensitization: Causes dermatitis.

### TARGET ORGAN(S) OR SYSTEM(S)

Liver. Kidneys.

### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### TOXICITY DATA

Oral

Rat

5800 mg/kg

LD50

Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Tremor.

Inhalation  
Rat  
50,100 mg/m<sup>3</sup>  
LC50

Intravenous  
Rat  
5500 MG/KG  
LD50

Oral  
Mouse  
3000 mg/kg  
LD50

Inhalation  
Mouse  
44,000 mg/m<sup>3</sup>  
LC50

Intraperitoneal  
Mouse  
1297 MG/KG  
LD50

Oral  
Rabbit  
5340 mg/kg  
LD50

Skin  
Guinea pig  
>9400 UL/KG  
LD50

#### IRRITATION DATA

Eyes  
Human  
500 ppm

Skin  
Rabbit  
395 mg  
Remarks: Open irritation test

Skin  
Rabbit  
500 mg  
24H  
Remarks: Mild irritation effect

Eyes  
Rabbit  
20 mg  
Remarks: Severe irritation effect

Eyes  
Rabbit  
20 mg  
24H  
Remarks: Moderate irritation effect

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

ACGIH CARCINOGEN LIST

Rating: A4

CHRONIC EXPOSURE - MUTAGEN

Species: Hamster  
Dose: 40 GM/L  
Cell Type: fibroblast  
Mutation test: Cytogenetic analysis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 273 GM/KG  
Route of Application: Oral  
Exposure Time: (13W MALE)  
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

Species: Mammal  
Dose: 31500 UG/M3/24H  
Route of Application: Inhalation  
Exposure Time: (1-13D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

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Section 12 - Ecological Information

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No data available.

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Section 13 - Disposal Considerations

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APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

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Section 14 - Transport Information

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DOT

Proper Shipping Name: Acetone  
UN#: 1090  
Class: 3  
Packing Group: Packing Group II  
Hazard Label: Flammable liquid  
PIH: Not PIH

IATA

Proper Shipping Name: Acetone  
IATA UN Number: 1090  
Hazard Class: 3  
Packing Group: II

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## Section 15 - Regulatory Information

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### EU DIRECTIVES CLASSIFICATION

Symbol of Danger: F Xi

Indication of Danger: Highly Flammable. Irritant.

R: 11 36 66 67

Risk Statements: Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

S: 9 16 26

Safety Statements: Keep container in a well-ventilated place. Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Highly Flammable (EU). Irritant.

Risk Statements: Irritating to eyes and skin. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

Safety Statements: Keep container in a well-ventilated place. Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take precautionary measures against static discharges. Wear eye/face protection.

US Statements: Target organ(s): Liver. Kidneys.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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## Section 16 - Other Information

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### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.