

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Acetone
Catalog Number: 1442949

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00448
Chemical Name: 2-Propanone
CAS No.: 67-64-1
Chemical Formula: C₃H₆O
Chemical Family: Ketones
PIN: 1090
Intended Use: Laboratory Reagent Solvent
Date of MSDS Preparation:
Day: 22
Month: 09
Year: 2005
MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

2. COMPOSITION / INFORMATION ON INGREDIENTS

Acetone

Percent Range: 100.0
Percent Range Units: weight / weight
CAS No.: 67-64-1
LD50: Oral rat LD50 = 5800 mg/kg
LC50: Inhalation rat LC50 = 50100 mg/m³/8H
TLV: 500 ppm (750 ppm STEL)
PEL: 750 ppm (1000 ppm STEL)
Ingredient WHMIS Symbol: Flammable / Combustible

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid
Physical State: Liquid
Odor: Sweet

MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION

EXTREMELY FLAMMABLE LIQUID AND VAPOR: VAPOR MAY CAUSE FLASH FIRE

HMIS:

Health: 1
Flammability: 4
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

Potential Health Effects:

Eye Contact: Causes moderate irritation

Skin Contact: Causes mild irritation Can defat the skin causing: skin redness, irritation or dermatitis

Skin Absorption: No effects anticipated

Target Organs: Not applicable

Ingestion: May cause: abdominal pain nausea vomiting diarrhea

Target Organs: None reported

Inhalation: May cause: respiratory tract irritation headache nausea, vomiting dizziness drowsiness confusion

Target Organs: Central nervous system

Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions

Chronic Effects: Chronic overexposure may cause dermatitis

Cancer / Reproductive Toxicity Information:

IARC Listed: No

NTP Listed: No

Additional Cancer / Reproductive Toxicity Information: None reported

Toxicologically Synergistic Products: None reported

WHMIS Hazard Classification: Class B, Division 2 - Flammable liquids

WHMIS Symbols: Flammable / Combustible

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Ingestion (First Aid): Give large quantities of water. Call physician immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Extremely Flammable. Material will readily ignite at room temperatures. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixture with air.

Flash Point: -18°C; 0°F

Method: Closed cup

Flammability Limits:

Lower Explosion Limits: 2.6

Upper Explosion Limits: 12.8

Autoignition Temperature: 465°C; 869°F

Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide.

Fire / Explosion Hazards: Very flammable. Do not expose to flames. Do not expose to sparks or other ignition sources. May react violently with: strong acids strong oxidizers bromine trifluoride peroxides Closed containers may explode if heated.

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical. Alcohol foam. Carbon dioxide Water spray to cool containers

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Containers can build up pressure if exposed to heat. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Evacuate area and fight fire from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Releases of this material may contaminate the environment. Remove all combustible material from spill area. Remove all ignition and spark-creating sources from the spill area. Cover spilled liquid with a commercially available flammable liquid sorbent such as vapor barrier blanket or activated carbon to avoid evolution of fumes. Vapors may travel to a source of ignition and flash back. May be ignited by: heat, sparks, or flames. Dike the material to create a barrier to combustibles.

Clean-up Technique: Eliminate all sources of ignition. Do not breathe the fumes. Cover with an inert material, such as sand. Use only non-sparking tools. Sweep up material. Incinerate material at an E.P.A. approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate general area (50 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation. Deny access to unnecessary and unprotected personnel. Remain up-wind from spilled material.

D.O.T. Emergency Response Guide Number: 127

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product. Use with adequate ventilation.

Storage: Protect from: heat sparks, flames and other ignition sources Keep away from: acids oxidizers

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Maintain adequate ventilation to keep vapor level below TWA for chemicals in this product. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: neoprene latex gloves lab coat

Inhalation Protection: adequate ventilation and / or half-face respirator with organic vapor / acid gas cartridge

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Protect from: heat sparks, flames and other ignition sources Keep away from: acids/acid fumes oxidizers

TLV: 500 ppm (750 ppm STEL)

PEL: 750 ppm (1000 ppm STEL)

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: 58.08

Odor: Sweet

pH: Not determined

Vapor Pressure: 400 mmHg @ 39.5°C

Vapor Density (air = 1): 2.00

Boiling Point: 56.5°C; 133.7°F

Melting Point: -94.6°C; -138.3°F

Specific Gravity (water = 1): 0.79

Evaporation Rate (water = 1): 12 (Butyl Acetate = 1)

Volatile Organic Compounds Content: 100%

Coefficient of Water / Oil: 1.73

Solubility:

Water: Miscible

Acid: Not determined

Other: Soluble in alcohol, ether, DMF, CHCl₃

Metal Corrosivity:

Steel: Not determined

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Contact with heat, sparks, open flames or other ignition sources. Extreme temperatures

Reactivity / Incompatibility: Incompatible with: sulfuric acid nitric acid May explode in contact with: oxidizers bromine trifluoride hydrogen peroxide

Hazardous Decomposition: Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: Oral rat LD50 = 5800 mg/kg

LC50: Inhalation rat LC50 = 50100 mg/m³/8H

Dermal Toxicity Data: Skin rabbit LD50 = 20 g/kg

Skin and Eye Irritation Data: Skin rabbit 500 mg/24H MILD; Eye rabbit 20 mg/24H MODERATE

Mutation Data: Cytogenetic analysis hamster fibroblast 40 g/l

Reproductive Effects Data: Oral rat TDLo = 273 g/kg - male 13 weeks pre-mating - paternal effects - spermatogenesis

Inhalation mammal TCLo 31500 µg/m³/24H - female 1-13 days after conception - fertility - post-implantation mortality

Ingredient Toxicological Data: Not applicable

12. ECOLOGICAL INFORMATION

Product Ecological Information: Aquatic toxicity TLM 96 over 1000 ppm

Ingredient Ecological Information: Not applicable

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Incinerate material at an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Rinsate from empty containers is hazardous waste and should be disposed of at an E.P.A. approved facility. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

T.D.G.:

Proper Shipping Name: Acetone

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Hazard Class: 3.1

PIN: 1090

Group: II

Subsidiary Risk: NA

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

National Inventories:

Canadian Inventory Status: DSL Listed: Yes

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

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Vendor Information. Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Edition. Volume 2. New York: A Wiley-Interscience Publication, 1981.

Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Technical Judgment. EU Occupational Exposure Limits On Line.

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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