

Material Safety Data Sheet

Acetone

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Acetone

Synonyms: 2- Propanone, Dimethyl ketone.

Chemical Family: Aliphatic ketone

Application: Industrial.

Distributed By:

Ingredient Depot

Prepared By: Ingredient Depot Compliance & Regulatory Affairs Dept.

Preparation date of MSDS: 25 October 2018

Telephone number of preparer: 1-800-463-0665

24-Hour Emergency Telephone Number (CANUTEC): (613) 996-6666

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Acetone 67-64-1	100	Oral LD50 (Rat) = 5800 mg/kg

Note: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Vapors are irritating to eyes. Contact with solution may cause moderate to severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Skin Contact: Prolonged or repeated contact may cause defatting and drying of the skin. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Inhalation: Vapours are moderately irritating to the respiratory passages. Inhalation of high vapour concentrations may cause central nervous system depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Ingestion: Although ingestion is unlikely, liquid would irritate upper digestive tract if swallowed. Ingestion of this product would cause headache, dizziness, fatigue and central nervous system depression. May cause lung damage if swallowed. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and or fever.

4. FIRST AID MEASURES

Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. Do not give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

Notes to Physician: If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Flash Point: -18 °C / 0 °F

Flash Point Method: Tag Closed Cup

Autoignition Temperature: 465°C /869°F

Flammable Limits in Air (%): Lower: 2.6% Upper: 12.6%

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Extremely flammable. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Vapour forms a flammable / explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Fight fire from maximum distance. This material may produce a floating fire hazard. Do not use water except as a fog. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture. Always stay away from ends of containers due to explosive potential.

Hazardous Decomposition/Combustion Materials (under fire conditions): Carbon monoxide. Carbon dioxide.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, INSTABILITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

Procedure for Clean Up: Flammable liquid. Eliminate all ignition sources. Isolate spill and stop leak where safe. Try to work upwind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills, remove by mechanical means and place in appropriate containers for disposal. For small spills, collect with non-combustible absorbent. Flush area with water to remove trace residue.

7. HANDLING AND STORAGE

Handling: Flammable. Do not cut, drill, grind, weld or perform similar operations on or near containers. Vapours may accumulate and travel to distant ignition sources and flashback. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Do not pressurize drum containers to empty them. Avoid breathing vapours and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until pipe is submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Extinguish any naked flames.

7. HANDLING AND STORAGE

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Bulk storage tanks should be diked. Vapours from tanks should not be released to atmosphere. Use explosion-proof ventilation to prevent vapour accumulation. Keep away from aerosols, flammables, oxidizing agents and corrosives. For containers or container linings use mild steel or stainless steel. For container paints, use epoxy paint, zinc silicate paint. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion proof. Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airbourne concentrations, use a NIOSH -approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

Gloves:

Impervious gloves. Nitrile gloves. PVC gloves. Viton gloves. Neoprene gloves. Natural rubber gloves.

Skin Protection: In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn.

Eyes: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Acetone	750 ppm STEL 500 ppm TLV-TWA	1800 mg/m ³ TWA 750 ppm TWA 1000 ppm STEL 2400 mg/m ³ STEL	2500 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Colour: Clear

Odour: Fruity. Characteristic.

pH 7

Specific Gravity: 0.792

Boiling Point: 56°C /133°F

Freezing/Melting Point: -94°C / -137°F

Vapour Pressure: >181 mm Hg @ 20°C

Vapour Density: 2

% Volatile by Volume: 100%

Evaporation Rate: 11.6

Solubility: Completely soluble.

VOCs: Not Available.

Viscosity: Not Available.

Molecular Weight: 58.08

Other: Octanol / Water Partition Coefficient : -0.24

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Avoid excessive heat, open flames and all ignition sources.

Materials to Avoid: Strong acids and bases. Strong oxidizers. Peroxides.

Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide.

Additional Information:

Reduced catalyist, especially when warm, reacts with oxygen on contact with air. Could ignite flammable materials.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Although ingestion is unlikely, liquid would irritate upper digestive tract if swallowed. Ingestion of this product would cause headache, dizziness, fatigue and central nervous system depression. May cause lung damage if swallowed. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and or fever.

Skin Contact: Prolonged or repeated contact may cause defatting and drying of the skin. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Inhalation: Vapours are moderately irritating to the respiratory passages. Inhalation of high vapour concentrations may cause central nervous system depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Eye Contact: Vapors are irritating to eyes. Contact with solution may cause moderate to severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Additional Information: Acute skin contact with Acetone is either slightly irritating or not irritating, based on animal and limited human information. Prolonged or repeated contact may cause defatting of the skin and produce dermatitis (dryness, irritation, redness and cracking). Eye contact with vapour or liquid may cause mild - severe irritation and may cause corneal injury. Depending on the concentration, the effects of inhalation may be: irritation of the nose and throat, headaches, light-headedness and tiredness, dizziness, drunkenness, drowsiness, nausea and vomiting. Unconsciousness may result if exposure is extremely high (greater than 10000 ppm). Intolerable nose and throat irritation would also occur at these concentrations. Even higher concentrations can cause collapse, coma and death. Tolerance to the effects of acetone can develop. No effects or minor effects (slight drowsiness) are expected with ingestion. If acetone is aspirated (breathed into the lungs during ingestion or vomiting) it can cause severe, life-threatening lung injury. Animal information suggests that acetone would be difficult to aspirate because it evaporates so quickly. Based on its physical properties, acetone can be aspirated into the lungs during ingestion or vomiting. Acetone has increased the liver toxicity of chemicals, such as carbon tetrachloride, chloroform, trichloroethylene, bromodichloromethane, dibromochloromethane, N-nitrosodimethylamine and 1,1,2-trichloroethane, the lung toxicity of styrene and the toxicity of acetonitrile and 2,5-hexanedione in laboratory animals. It appears to inhibit the metabolism and elimination of ethyl alcohol, thereby potentially increasing its toxicity. Acetone can either increase or decrease the toxicity of 1,2-dichlorobenzene, depending on the concentration of acetone used.

Acute Test of Product:

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Acetone	Not listed.	A4

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: The available information suggests that inhalation of Acetone can cause fetotoxicity in rats and mice and embryotoxicity in mice, but only in the presence of maternal toxicity. Negative mutagenicity results have been obtained in tests using cultured mammalian cells and bacteria. Sperm effects have been observed in rats already experiencing kidney damage. No effects on fertility have been observed.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Acetone	LC50 96 h (Oncorhynchus mykiss) 4.74-6.33 ml/L LC50 96 h (Pimephales promelas) 6210-8120 mg/L static LC50 96 h (Lepomis macrochirus) 8300 mg/L LC50 96 h (Oncorhynchus mykiss) 4.74-6.33 ml/L	Not Available.	Not Available.

Other Information:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. Biodegrades (slow). Rapid volatilization. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

Contaminated Packaging: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: ACETONE

DOT Hazardous Class 3

DOT UN Number: UN1090

DOT Packing Group: II

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

TDG (Canada):

TDG Shipping Name: ACETONE

Hazard Class: 3

UN Number: UN1090

Packing Group: II

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Acetone	Not Listed.	Listed	Not Listed.

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:

B2 FLAMMABLE LIQUIDS

D2B TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information:

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

Disclaimer:

NOTICE TO READER:

Ingredient Depot, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Ingredient Depot Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Ingredient Depot makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Ingredient Depot's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

*****END OF MSDS*****