Acetone MSDS

Acetone Material Safety Data Sheet (MSDS)

MANUFACTURER'S CONTACT INFORMATION:

I. Product Identification

Trade Name Acetone
Product Use Chemical Intermediate

II. Hazardous Ingredients of Material

Components Amount (Vol. %) CAS No. ACGIH TLV
Acetone 100 67-64-1 –

Exposure Limits (See Section VI for additional Exposure Limits)

Governing Body CAS No. Exposure Limits
ACGIH 67-64-1 STEL 750 ppm
ACGIH 67-64-1 TWA 500 ppm
OSHA 67-64-1 TWA 1,000 ppm

Emergency Overview:

Danger! Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. Vapor
concentrations may cause drowsiness. Causes skin and eye irritation. Harmful if swallowed. May cause target organ or
system damage to the following: Eye, skin, respiratory system, central nervous system.

HAZARD RATINGS

Key: 0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme

Health Fire Reactivity PPI
NFPA 1 3 0
HMIS 1 3 0 X

III. Physical/Chemical Data

Appearance & Odor Colorless liquid
Boiling Point 133º F
Melting Point -137.2º F
Specific Gravity 0.79
Molecular Weight g/mole 58.08
pH 7
Odor Sweet, pungent
Odor Threshold 62 ppm
Vapor Pressure (mm Hg @20º C) 181
Solubility in Water Complete
Volatile (wt %) 100%

IV. Fire and Explosion Data

Flash Point 1.4

Flammable Limits in Air (% By Volume)
Lower 2.5%
Upper 12.8%
Auto Ignition Temperature 869º F
Unusual Fire & Explosion Hazards Use water spray. Use water spray to cool fire exposed tanks and containers.
Acetone/water solutions that contain more than 2.5% acetone have flash points.
When the acetone concentration is greater than 8% (by weight) in a closed
container, it would be within flammable range and cause fire or explosion if a
source of ignition were introduced.
Fire Extinguishing Media Water spray, alcohol resistant foam, dry chemical or carbon dioxide.

V. Reactivity Data

Stability Stable

Conditions to Avoid Avoid heat, sparks and open flame.
Incompatibility Acetone may form explosive mixtures with chromic anhydride, chromyl alcohol, hexacholromelamine, hydrogen peroxide, permonosulfuric acid, potassium terbutoxide and thioglycol. Strong oxidizers.
Hazardous Decomposition May produce carbon dioxide, carbon monoxide and other asphyxiants.
Hazardous Polymerization Will not occur.

VI. Health Hazard and Toxicological Data

Pre-existing Medical Conditions: The following diseases or disorders may be aggravated by exposure to this product.
Skin, eye, lung (asthma-like conditions).

Chronic Exposure Effects of Exposure

Eyes Contact with the eye may cause moderate to severe irritation.
Skin Moderately irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).
LD50 mg/kg Rabbit, 20,000 Draize Skin Score: no data Out of 8.0
Inhalation High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headache, paralysis and loss of consciousness and even death).High vapor concentrations are irritating to the eyes, nose, throat and lungs.
LC50 (mg/1) no data
LC50 (mg/m_3) Rat 8 hrs. 50,000
LC50 (ppm) no data
Ingestion Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. May produce central nervous system effects, which may include dizziness, loss of balance and coordination, unconsciousness, coma and even death.
LD50 (g/kg) Rat 5.8

VII. First Aid Procedures

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.
Eye Contact Flush eye(s) with water for 15 minutes. Get medical attention.
Skin Contact Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately.
Wash clothes separately before reuse.
Ingestion If swallowed, DO NOT INDUCE VOMITING. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Get medical attention immediately. See Section X for additional first aid information.

VIII. Preventive Measures

Consult with a Health and Safety Professional for Specific Selections

A. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection Concentrations in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposure to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is a possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face air respirator with escape bottle or SCBA. Wear a NIOSHapproved (or equivalent) full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

Eye/Face Protection Splash proof chemical goggles or full-face shield recommended to protect against splash of
product.
Clothing/Gloves The glove(s) list below may provide protection against permeation. Gloves or other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Neoprene, Natural rubber.
Engineering Controls Use with adequate ventilation. Ventilation is normally required when handling or using this
product to keep exposure to airborne contaminants below the exposure limit. Use explosionproof ventilation equipment.
Other The following materials are acceptable for use as protective clothing; Neoprene, Natural rubber. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse.

B. STORAGE AND HANDLING

Storage Conditions Keep away from heat, sparks and flame. Store in a cool, dry place. Keep container closed
when not in use.
Handling Procedure Use only in a well-ventilated area. Ground and bond containers when transferring material.
Avoid breathing (dust, vapor, mist, gas). Avoid contact with this material. Wash thoroughly after handling. Do not use air pressure to unload containers.

Continued on Next Page

VIII. Preventive Measures (Continued)

C. ENVIRONMENTAL PROTECTION

Spill and Leak
Procedure
Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section VIII of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. U.S. regulations require reporting spills of this material could that reach any surface waters. The toll-free number for the U.S. Coast Guard National Response Center is (800) 424-8802. After removal, flush contaminated area thoroughly with water.
Waste Disposal Follow federal, state and local regulations. In Canada, follow federal, provincial and local
regulations. This material is a RCRA hazardous waste. DO NOT flush material to drain or storm sewer. Contract to authorized disposal service.
Ecological
Information
This product is not expected to persist in the environment.

D. TRANSPORTATION INFORMATION

Governing Body U.S. DOT
Proper Shipping Name Acetone
Mode Ground
Hazard Class 3 (Flammable Liquid)
UN/NA Number UN1090

IX. Regulatory Information/Classifications

Regulatory List Component CAS Number

ACGIH – Occupational Exposure Limits – Carcinogens Acetone 67-64-1
ACGIH – Occupational Exposure Limits – TWAs Acetone 67-64-1
ACGIH – Short Term Exposure Limits Acetone 67-64-1
CAA (Clean Air Act) – HON Rule – SOCMI Chemicals Acetone 67-64-1
Canada – WHMIS – Ingredient Disclosure Acetone 67-64-1
CERCLA/SARA – Hazardous Substances and their RQs Acetone 67-64-1
CERCLA/SARA – Hazardous Substances and their RQs Acetone 67-64-1

CERCLA/SARA – Hazardous Substances and their RQs Acetone 67-64-1
Inventory – Australia – (AICS) Acetone 67-64-1
Inventory – Canada – Domestic Substances List Acetone 67-64-1
Inventory – China Acetone 67-64-1
Inventory – European – EINECS Inventory Acetone 67-64-1
Inventory – Japan – (ENCS) Acetone 67-64-1
Inventory – Korea – Existing and Evaluated Acetone 67-64-1
Inventory – Philippines – (PICCS) Acetone 67-64-1
Inventory – TSCA – Section 8(b) Inventory Acetone 67-64-1
Massachusetts – Right to Know List Acetone 67-64-1
New Jersey – Department of Health RTK List Acetone 67-64-1
New Jersey – Special Hazardous Substances Acetone 67-64-1
OSHA – Final PELs – Time Weighed Averages Acetone 67-64-1
Pennsylvania – Right to Know List Acetone 67-64-1
TSCA – Section 12(b) – Export Notification Acetone 67-64-1
TSCA – Section 4 – Chemical Test Rules Acetone 67-64-1

Continued on Next Page

Acetone Material Safety Data Sheet (MSDS)

IX. Regulatory Information/Classifications - Continued

Regulatory Information/Classifications Title III, Sections 311, 312
Acute Chronic Fire Reactivity Sudden Release of Pressure
YES NO YES NO NO

X. Other Information

If swallowed, acetone should be removed by emesis and/or gastric lavage. Mechanical assisted ventilation may be necessary. In severe cases, an initial period of hypoglycemia may require correction by intravenous solutions of dextrose. In some cases, an initial period of hyperglycemia has occurred during the recovery phase and has lasted for a few days. Treatment with insulin may be beneficial but should be used cautiously. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. They may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner or properly disposed of. This product is subject to the Chemical Division and Trafficking Act of 1988 and subject to specific record keeping requirements. WHMIS Classification: Class B, Division 2 – Flammable Liquids.

The information contained in this Material Safety Data Sheet is furnished without warranty of any kind, express or implied, and relates only to the specific material designated herein. User assumes responsibility for use or reliance on this data and assumes liability for damages related to the use or misuse of this product. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations.

Specification

Acetone

Chemical name 2-Propanone
CAS number 67-64-1
Index number 606-001-00-8
EEC number 200-662-2
Molecular formula C_3H_6O
Relative molecular weight 58.08
Product code 2110

Description Acetone of 99.90 % mass purity

Specifications

Properties	Units	Limits	Test Methods ASTM	ISO	Other
Appearance		Clear and free from suspended matter	D4176		Visual
Colour	Pt-Co	5 max	D1209	6271	
Acidity as CH_3COOH	mg/kg	20 max	D1613	2887	
Water	mass %	0.30 max	D1364	760	
Acetone (dry basis)	mass %	99.90 min			GC
Methanol and ethanol	mg/kg	200 max			GC
DAA	mg/kg	120 max			GC
Benzene	mg/kg	0.8 max			GC
MEK	mg/kg	20 max			GC
Further properties					
Typical values					
Miscibility with water		No opalescence	D1722	1388-6	
Density at 20 º C	g/ml	0.789-0.792	D4052	12185	
1					
Distillation at 101.3 kPa:					
Initial boiling point	°C	55.8	D1078	918	
Dry point	°C	56.6			
Residue on evaporation	mg/kg	10	D1353	759	
Permanganate test at 25 °C	minutes	120	D1363	1388-12	

(Revision 4: January 2006)

Uses

As a solvent in the following applications:

Lacquers, lacquer thinners, liquid printing inks, nail polish removers, in the filling of acetylene cylinders, polyester resins, bituminous paints, PVC cloth manufacture, polyurethane, adhesives and explosives.

A raw material for the manufacture of:

Methyl iso-butyl ketone, di-acetone alcohol, hexylene glycol, methyl methacrylate and fine chemicals.

The Sales Specification values are continuously checked, documented and stored within the scope of quality assurance.

Further properties are of an informational nature only and are not checked regularly. If the Sales Specifications are complied with, it can generally be assumed that all further properties and typical data conform to the values given.

Claims

Acetone complies with the current European, British and United States Pharmacopoeias' requirements

Disclaimers

Because of the nature of our manufacturing processes, our products do not contain any plant and animal products.

It is the responsibility of our customers to determine that their use of our product(s) is safe, lawful and technically suitable in their intended applications. Because of possible changes in law and regulations, as well as possible changes in our products, we cannot guarantee that the status of this product will remain unchanged. We, therefore, recommend that customers continuing to use our products verify their status periodically.