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Acetone Material Safety Data Sheet (MSDS)

MANUFACTURER'S CONTACT INFORMATION:

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

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IV. Fire and Explosion Data

Flash Point	1.4
Flammable Limits in Air (% By Volume)	
Lower	2.5%
Upper	12.8%
Auto Ignition Temperature	869° 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, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide 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/l) 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

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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 NIOSH-approved (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 explosion-proof 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.

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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 – SOCM Chemicals	Acetone	67-64-1
Canada – WHMIS – Ingredient Disclosure	Acetone	67-64-1
CERCLA/SARA – Hazardous Substances and their RQs	Acetone	67-64-1
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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 Weighted 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

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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.