



# U N I L A M I N T E R N A T I O N A L

## UNILAM INTERNATIONAL LIMITED

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## MATERIAL SAFETY DATA SHEET:

### ACETONE:

#### 1. Company Information

**Company:** Unilam International Limited  
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#### 2. Composition/Information On Ingredients

**Product Name:** Acetone

**Synonyms / Trade Names:** 2-Propanone, beta-Ketopropane Dimethyl Ketone.  
Dimethyformaldehyde, Dimethylketal, Ketone Propane,  
Methyl Ketone, Propanone, Pyroacetic Acid, Pyroacetic Ether

Ingredient:	CAS No:	EU Index:	Gross Formula:	EINECS No.:
Acetone	67-64-1	606-001-00-8	C3-H6-O	200-662-2

#### 3. Hazard Identification

##### Main Hazards And Effects:

Highly Flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

#### 4. First Aid Measures

**NOTE: Always Keep affected person away from heat, sparks and flames.**

##### **Swallowing:**

**NEVER MAKE UNCONCIOUS PERSON VOMIT OR DRINK FLUIDS!** The affected person must immediately drink large volumes of water to dilute the swallowed chemical. Once the water has been swallowed, try to induce vomiting by having affected person touch back of their throat with their finger. Seek medical attention immediately.

##### **Inhalation:**

Move the affected person to fresh air at once and seek medical attention if any discomfort continues. Perform artificial respiration if breathing has stopped. If the affected person has difficulty in breathing, properly trained personnel may assist by administering 100% oxygen. Keep the person warm and at rest. Seek immediate medical attention.

##### **Skin Contact:**

Remove the affected person from the source of contamination and promptly remove any contaminated clothing. Wash the contaminated skin and clothing with soap or mild detergent and water. Seek medical attention immediately.

##### **Eye Contact:**

Make sure any contact lenses are removed from the eyes and immediately rinse the eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get medical attention.

#### 5. Fire Fighting Measures

##### **Suitable Extinguishing Media:**

Water spray, fog or mist dry chemicals, sand, dolomite etc. DO NOT extinguish the fire unless the flow can be stopped first. Halon, Powder. Foam or CO2.

##### **Special Fire Fighting Procedures:**

Water may be ineffective but use it to keep fire-exposed containers cool. If a leak or spill has not ignited, use water to disperse vapours and protect the personnel stopping the leak. Water spray may be used to flush spills away from exposures and dilute the spills to non-flammable mixtures. Keep run-off water out of sewers and water sources.

Dike for water control. Avoid spraying water in a straight hose stream as it will scatter and spread fire. Cool any containers exposed to flames with water until well after the fire is out. Move any containers from the fire area if this can be done without risk.

Withdraw immediately in case of rising sound from venting safety device or any discolouration of tanks due to fire. Use water spray to reduce vapours. For a massive fire in a cargo area, use an unmanned hose holder or monitor nozzles. If this is not possible withdraw and let the fire burn out. If a risk of water pollution occurs, notify the authorities.

## 5. Fire Fighting Measures (continued)

### Hazardous Decomposition Products:

Forms explosive mixtures with air. Extremely flammable. May explode in a fire. May travel considerable distance to the source of ignition and flash back. Vapour explosion and poison hazard indoors, outdoors and in sewers.

## 6. Accidental Release Measures

### Methods For Cleaning Up:

Ventilate well and stop the flow of gas or liquid if possible. Remove all ignition sources. Do not allow the chemical to enter confined spaces such as sewers due to explosion risk. Sewers designed to preclude the formation of explosive concentrations of vapour may be permitted. Absorb small quantities with paper towels and evaporate in safe place (fume hood). Allow sufficient time for the vapours to completely clear the hood ducts, then burn the paper in a location away from any combustible materials. Absorb in vermiculite, dry sand or earth and place into containers. Allow evaporation. Keep out of confined spaces because of explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Provide ventilation and confine the spill. Do not allow run-off to sewer.

## 7. Handling And Storage

### Handling:

Keep away from heat, sparks and open flame. Use explosion proof electric equipment. Static electricity and formulation of sparks must be prevented. Avoid spilling, skin and eye contact. Ventilate well and avoid breathing the vapours. Use an approved respirator if the air contamination is above the accepted level. Do not use contact lenses. Read and follow the manufacturer's recommendations.

### Storage:

Flammable / combustible - Keep away from oxidizers, heat and flames. May attack some plastics, rubber and coatings. Keep in a cool, dry, ventilated storage and closed containers. Ground container and transfer equipment to eliminate static electric sparks.

### Storage Requirements:

Flammable liquid storage.

## 8. Exposure Controls/ Personal Protection

### Exposure Limits:

STD:	Ingredient:	LT EXP (8 Hrs):	ST EXP (15 mins):
	Acetone	750 ppm	A 500 pptn

## 8. Exposure Controls/ Personal Protection (continued)

### Personal Protection Respiratory System:

Provide explosion –proof general and local exhaust ventilation. Work in flume cupboard.  
Use engineering controls to reduce air contamination to permissible exposure level.  
Wear an air-supplied mask in confined areas.

Respirators should be:

GMOVc: Gas mask with organic vapour canister (chin style).  
GMOV fb: Gas mask w/organic vapour canister (front or back mounted).  
SAF: Supplied-air respirator with full-face piece helmet or hood.  
SCBAF: Self-contained breathing apparatus with full-face piece.

### Skin And Body:

Wear appropriate clothing to prevent repeated or prolonged skin contact. Provide safety shower.

### Hands:

Use protective gloves made of butyl rubber, or P.T.F.E. (Teflon).

### Eyes:

Wear approved chemical safety goggles where eye exposure is reasonably probable. Contact lenses should not be worn when working with this chemical. Provide eyewash station.

### Hygienic Work Practices:

**DO NOT SMOKE IN THE WORK AREA!** Wash at the end of each work shift and before eating, smoking or using the toilet. Wash promptly if skin becomes wet. Promptly remove any clothing that becomes wet or contaminated.

Isolate contaminated clothing and wash before reuse. Use appropriate hand lotion to prevent defatting and cracking of skin. No eating or drinking while working with this material.

## 9. Physical And Chemical Properties

<b>Appearance:</b>	Liquid. Clear.
<b>Colour:</b>	Colourless
<b>Odour Aromatic:</b>	Pleasant / agreeable. Characteristic: Acetone, Ketone.
<b>Solubility:</b>	Miscible with water, alcohol and ether.
<b>Solubility Value:</b>	100 (911009 H2O 20°C)
<b>Molecular Weight:</b>	58.08

## 9. Physical And Chemical Properties (continued)

<b>Boiling Point:</b>	-56°C (Interval).
<b>Melting / Freezing Point:</b>	-95°C (Interval).
<b>Density / Specific Gravity:</b>	0.79 g/ml
<b>Vapour Density:</b>	2 (Air = 1).
<b>Vapour Pressure:</b>	182
<b>Evaporation Rate:</b>	7.70
<b>Evaporation Factor:</b>	1.40
<b>Volatile By Volume:</b>	100%
<b>Odour Threshold:</b>	100 ppm (Lower)
<b>Viscosity:</b>	0.763 mPas @ 20°C
<b>Flashpoint:</b>	-18°C Closed Cup
<b>Auto Flammability:</b>	540°C
<b>Explosion Limit In Air:</b>	Lower: 2.15% Upper : 13.30%

## 10. Stability And Reactivity

### Conditions And Materials To Avoid:

Heat, sparks, flames. Product is normally stable.

Activated carbon antimony pentafluoride, Barium Hydroxide, Boron Trifluoride, Bromine, Tribromomethane, Trichloromethane, Chromium Oxychloride, Chromium Trioxide, Decaborane, Hydrogen Peroxide, 2-Methylbuta-1, 3-Diene, Methyl Ethyl Ketone Peroxide, Nitric Acid, Oleum, Potassium-tert-Butoxide, Potassium Sulphate, Sodium Hydroxide, Sulphur Dichloride, Sulphuric Acid, Trichloromelamine.

Also avoid strong oxidizing agents.

### Hazardous Decomposition Products:

Toxic gases/vapours/fumes of Carbon monoxide (CO) and Carbon Dioxide (CO<sub>2</sub>).

## 11. Toxicological Information

**Toxic Dose-LD50:** 9750mg/kg (oral rat)

Toxic effects on fertility not demonstrated. Toxic effects on foetal developments not confirmed.

### **Inhalation:**

Vapours may cause drowsiness and dizziness.

### **Skin:**

Repeated exposure can cause skin dryness and cracking.

### **Eyes:**

Irritating to eyes.

### **Route Of Entry:**

Inhalation, Skin absorption, Ingestion, Skin and eye contact.

### **Medical Symptoms:**

Extreme irritation to eyes and mucous membranes. Rhinitis (inflammation of the nasal mucous membranes). Upper respiratory irritation. General respiratory distress, unproductive cough. may cause suffocation. Skin irritation. Nausea, vomiting. Central nervous system depression.

Drowsiness, dizziness, disorientation, vertigo. Mild intoxication (including fatigue, lassitude, irritability, headache and nausea). Hypotension (Low blood pressure).

### **Medical Considerations:**

Skin disorders and allergies.

## 12. Ecological Information

Not regarded as dangerous for the environment

## 13. Disposal Considerations

Incinerate in suitable combustion chamber. Absorb in vermiculite or dry sand, dispose in licensed special waste. Confirm disposal procedures with environmental engineer and local regulations. Dispose of in accordance with Local Authority requirements. This material and its container must be disposed of as hazardous waste.

#### 14. Transport Information

<b>Label For Conveyance:</b>	Flammable
<b>Land (Road / Railway):</b>	
<b>Proper Shipping Name:</b>	Acetone
<b>U.N. No:</b>	1090
<b>ADR / RID Class:</b>	3
<b>ADR / RID Item No:</b>	3° (b)
<b>ADR Hazard No:</b>	33 Highly Flammable Liquid (Flash Point 23°C)
<b>Marginal:</b>	2301
<b>Hazchem Code:</b>	2YE
<b>CEFIC TEC(R) No:</b>	30,30G30
<b>Sea:</b>	
<b>Proper Shipping Name:</b>	Acetone
<b>U.N. No:</b>	1090
<b>IMDG Class:</b>	3
<b>Packing Group:</b>	II
<b>Medical First Aid Guide (MFAG):</b>	300
<b>Emergency Schedule (EmS) No:</b>	3-06
<b>Marine Pollutant:</b>	No
<b>Air:</b>	
<b>Proper Shipping Name:</b>	Acetone
<b>U.N. No:</b>	1090
<b>IATA – DGRClass:</b>	3
<b>Packing Group:</b>	II

## 15. Regulatory Information

EEC (EINECS) No:	202-851-5
Label For Supply:	Highly flammable. Irritant
Risk Phrases:	R-11 Highly flammable R-36 Irritating to eyes and skin R-66 Repeated exposure may cause skin dryness or cracking R-67 Vapours may cause drowsiness and dizziness
Safety Phrases:	S-2 Keep out of reach of children S-9 Keep container in a well ventilated place S-16 Keep away from sources of ignition – No Smoking S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S-60 This material and its container must be disposed of as hazardous waste

### User Notes:

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residue vapours may explode on ignition, do not cut, drill, grind or weld on or near this container.

## 16. Other Information

### DISCLAIMER:

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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