

1. IDENTIFICATION

Product Name	Acetone
Other Names	2-Propanone; Dimethyl Ketone; Ketone; Ketone Propane
Uses	Solvents, raw material for cleaning agents and disinfectants, for washing and cleaning agents, raw material for cosmetic agents, raw material for pharmaceutical products, raw material for printing inks and printing ink additives, raw material for adhesives and binders, raw material for welding and soldering aids, paint related material.
Chemical Family	No Data Available
Chemical Formula	C3H6O
Chemical Name	Acetone
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) 5

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Flammable Liquids - Category 2
Serious Eye Damage/Irritation - Category 2A
Specific Target Organ Toxicity (Single Exposure) - Category 3



Pictograms



Signal Word

Danger

Hazard Statements

AUH066	Repeated exposure may cause skin dryness or cracking
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary Statements

Prevention	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
	P233	Keep container tightly closed.	
	P240	Ground/bond container and receiving equipment.	
	P241	Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.	
	P242	Use only non-sparking tools.	
	P243	Take precautionary measures against static discharge.	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P264	Wash hands and contaminated body thoroughly after handling.	
	P271	Use only outdoors or in a well-ventilated area.	
	P280	Wear protective gloves/protective clothing/eye protection/face protection.	
	Response	P303 + P361 + P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312		Call a POISON CENTER or doctor/physician if you feel unwell.	
P337 + P313		If eye irritation persists: Get medical advice/attention.	
Storage	P370 + P378	In case of fire: Use carbon dioxide (CO ₂), dry chemical or foam for extinction. Alcohol resistant foam is the preferred fire-fighting medium but, if it is not available, normal foam can be used.	
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.	
Disposal	P405	Store locked up.	
	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.	

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Acetone	No Data Available	67-64-1	100.0 %



4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.
Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.
Skin	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.
Inhaled	Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product. Chronic: Long Term Effects: Long term exposure by swallowing or repeated inhalation, may cause degenerative changes in the liver and other organs. Exposure to acetone in the work setting may add to any health effects caused by intake of alcoholic drinks, particularly in regard to narcotic and liver effects.

5. FIRE FIGHTING MEASURES

Flammability Conditions	Product is a highly flammable liquid.
Extinguishing Media	Alcohol resistant foam is the preferred fire fighting medium but, if it is not available, fine water spray or water fog can be used.
Fire and Explosion Hazard	Highly flammable liquid. May form flammable vapour mixtures with air. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Vapour may travel a considerable distance to source of ignition and flash back.
Hazardous Products of Combustion	Highly flammable liquid. Heating can cause expansion or decomposition leading to violent rupture of containers. Incompatible with Strong oxidizing agents, halogenated compounds and sources of ignition. Burning can produce carbon dioxide and water, incomplete combustion can produce carbon monoxide.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Flash Point	-17 °C
Lower Explosion Limit	2.15 %
Upper Explosion Limit	13 %
Auto Ignition Temperature	465 °C
Hazchem Code	•2YE

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Shut off all possible sources of ignition. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Prevent liquid entering sewers, basements and work pits; vapor may create explosive atmosphere. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Use water spray to reduce vapors. No smoking, flames, or flares in hazard area.
Clean Up Procedures	If possible, the spilled liquid should be pumped or otherwise transferred to a waste container. Residual liquid should be absorbed using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose.



When saturated collect material, transfer to suitable, labelled, dry chemical- waste containers and dispose of promptly as hazardous waste.

Containment	Stop leak if safe to do so
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material).

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Keep away from heat and sources of ignition. Intrinsically safe equipment (e.g explosion-proof equipment) only must be used in areas where this chemical is being used. The use of compressed air for filling, discharging, mixing or handling is prohibited due to the vapour hazard. Containers must be earthed to avoid generation of static charges when agitating or transferring product. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. Do not eat, drink or smoke in areas of use or storage.
Storage	Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Ground and bond storage containers. Store away from incompatible materials as listed in section 10. Protect from heat, and sources of ignition. Do not eat, drink or smoke in areas of use or storage. This product has a UN Classification of 1090 and a Dangerous Goods Class 3 (flammable) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Container type/package must comply with all applicable local legislation. Store in original packaging as approved by manufacturer

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); ACETONE (CAS 67-64-1): TWA = 500ppm (1185mg/m ³) STEL = 1000ppm (2375mg/m ³) NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use a flame proof exhaust ventilation system.
Personal Protection Equipment	RESPIRATOR: Wear a respirator with suitable Type 'A' filter for organic gases and vapours if engineering controls are inadequate (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Neoprene or latex gloves (AS2161). CLOTHING: Chemical-resistant coveralls and safety footwear (AS3765/2210).
Work Hygienic Practices	Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid



Odour	Ketone Odour
Colour	Colourless, clear
pH	No Data Available
Vapour Pressure	180 mmHg (20°C) torr (@ 20 °C)
Relative Vapour Density	2.0 Air = 1
Boiling Point	55 - 57 °C
Melting Point	-95
Freezing Point	-95 °C
Solubility	Soluble 25°C
Specific Gravity	0.791
Flash Point	-17 °C
Auto Ignition Temp	465 °C
Evaporation Rate	6 n-Butyl acetate = 1
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	-0.24
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	0.303 cPs (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under directed conditions of use, storage and temperature. Highly flammable liquid.
Conditions to Avoid	Avoid exposure to heat, sources of ignition, open flame and build-up of static electricity.
Materials to Avoid	Incompatible with strong oxidising agents , strong alkalis , bromine , and mineral acids .
Hazardous Decomposition Products	Burning can produce carbon dioxide and water, incomplete combustion can produce Oxides of carbon.



Hazardous Polymerisation

Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION**General Information**

Oral LD50 (rat): 5800-8400 mg/kg
 Dermal LD50 (rabbit): 20000 mg/kg
 Inhalation LC50 (rat): 32000 ppm/4 hr
 Skin corrosion/irritation: Slight irritant (rabbit).
 Serious eye damage/irritation: Moderate irritant (rabbit).
 Chronic effects: A study of 800 workers occupationally exposed to acetone vapours (600-2150 ppm) over an 18 year period revealed no significant adverse effects in exposed compared with unexposed workers.

Eye/Irritant

Vapour may irritate the eyes. Liquid and mists may severely irritate or damage the eyes.

Ingestion

Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).

Inhalation

Material may be irritant to the mucous membranes of the respiratory tract (airways). Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Skin/Irritant

Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Carcinogen Category

No Data Available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Fish Oncorhynchus mykiss LC50/96hr: 5540mg/L Fish Bluegill sunfish LC50/96hr: 8300mg/L Fish Pimephales promelas LC50/96hr: 8120mg/L Daphnia Magna EC50/24hr: 10mg/L Selenastrum Caprocornutum EC50/96hr: >100mg/L

Persistence/Degradability

Product is volatile and biodegradable.

Mobility

When released into the soil, this material will be mobile and may contaminate groundwater.

Environmental Fate

Do NOT let product reach waterways, drains and sewers.

Bioaccumulation Potential

Not expected to bioaccumulate significantly.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS with Class 3, UN1090.

Special Precautions for Land Fill

Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated by rinsing with water. Non-returnable containers should be de-gassed prior to disposal. Waste containers can either be reused for the same material or disposed in accordance with government regulation. Suitable for incineration by approved agent under controlled conditions if permitted by local authorities, otherwise disposal must be in accordance with local waste and environmental authority requirements.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

Proper Shipping Name	ACETONE
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1090
Hazchem	•2YE
Pack Group	II
Special Provision	No Data Available

Sea Transport

IMDG

Proper Shipping Name	ACETONE (ACETONE SOLUTIONS)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1090
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available
EMS	FE,SD
Marine Pollutant	No

Air Transport

IATA

Proper Shipping Name	ACETONE
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1090
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	5

National/Regional Inventories

Australia (AICS)	Listed
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Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	200-662-2
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes ACETON0100, ACETON0200, ACETON0300, ACETON0400, ACETON0500, ACETON0501, ACETON0600, ACETON0601, ACETON0700, ACETON0800, ACETON0900, ACETON0901, ACETON1000, ACETON1001, ACETON1002, ACETON1003, ACETON1004, ACETON1005, ACETON1006, ACETON1007, ACETON1008, ACETON1009, ACETON1010, ACETON1011, ACETON1012, ACETON1013, ACETON1014, ACETON1015, ACETON1016, ACETON1017, ACETON1018, ACETON1019, ACETON1020, ACETON1021, ACETON1022, ACETON1023, ACETON1024, ACETON1025, ACETON1026, ACETON1027, ACETON1028, ACETON1029, ACETON1030, ACETON1031, ACETON1032, ACETON1033, ACETON1034, ACETON1035, ACETON1036, ACETON1037, ACETON1038, ACETON1039, ACETON1100, ACETON1101, ACETON1200, ACETON1201, ACETON1202, ACETON1300, ACETON1400, ACETON1500, ACETON1600, ACETON1800, ACETON1900, ACETON2000, ACETON2001, ACETON2002, ACETON2003, ACETON2004, ACETON2005, ACETON2006, ACETON2100, ACETON2200, ACETON3000, ACETON3200, ACETON4000, ACETON4001, ACETON4002, ACETON5000, ACETON5001, ACETON6000, ACETON7000, ACETON8000, ACETON8001, ACETON8002, ACETON8100, ACETON1302, ACETON2007, ACETON9000, ACETON3010, ACETON3022, ACETON3020, ACETON3021, ACETON3023, ACETON3030, ACETON3031, ACETON3040, ACETON3050, ACETON3060, ACETON3070, ACETON3080, ACETON3090, ACETON3100, ACETON3110, ACETON3120, ACETON3130, ACETON3140, ACETON3160, ACETON3170, ACETON3180, ACETON3190, ACETON3210, ACETON3221, ACETON3220, ACETON3222, ACETON3223, ACETON3224, ACETON3230, ACETON3240, ACETON3251, ACETON3250, ACETON3260, ACETON3024, ACETON3025, ACETON1320, ACETON3032, ACETON3033, ACETON0070, ACETON0071, ACETON0077, ACETON0072, ACETON3145, ACETON1310, ACETON0080, ACETON3034, ACETON3035, ACETON3036, ACETON3037, ACETON3199, ACETON1080, ACETON1060, ACETON1081, ACETON8888, ACETON1301

Revision 2
Revision Date 03 Jun 2014
Reason for Issue Updated SDS

Key/Legend

- < Less Than
- > Greater Than
- AICS** Australian Inventory of Chemical Substances
- atm** Atmosphere
- CAS** Chemical Abstracts Service (Registry Number)
- cm²** Square Centimetres
- CO₂** Carbon Dioxide
- COD** Chemical Oxygen Demand
- deg C (°C)** Degrees Celcius
- EPA (New Zealand)** Environmental Protection Authority of New Zealand



deg F (°F) Degrees Fahrenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluble in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Health and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

