

ASCC (NZ) Pty. Ltd

MSDS Summary Information

For further information : Please refer to the ASCC SDS

Issue: February, 2010

PRODUCT: Acetone
Other Names: 2-propanone, dimethyl ketone
Uses: Industrial chemical

UN No. 1090
Dangerous Goods Class: 3
Subsidiary Risk: None
Packing Group: II
HAZCHEM: 2YE

Hazardous Nature:	This product is classified as hazardous under HSNO criteria
Exposure Standards:	TEL (air): Not available; TWA 1185 mg/m ³ (500 ppm) STEL : 2375 mg/m ³ (1000 ppm)
Environmental Standards:	EEL (air) : Not available

Physical Characteristics (Typical)		Section 9 of SDS
Appearance	Clear, colourless liquid	
Boiling Point/Range (°C)	56	
Flashpoint (°C)	-17	
Specific gravity/Density (g/ml @ 15°C)	0.792	
Chemical Stability	Stable at room temperature and pressure	
Reactivity	Strong oxidising agents, strong alkalis and strong mineral acids and bromine	

Product Ingredients		Section 3 of SDS
Acetone	67-64-1	> 99.5
Water	7732-18-5	< 0.5

For further ingredients information, please refer to the SDS

Hazardous Statements		Section 2 of SDS
H225 Highly flammable liquid and vapour	H316 Causes mild skin irritation	
H304 May be harmful if swallowed	H320 Causes eye irritation	

For further Hazard and Precautionary information, please refer to the SDS

Dangerous Goods	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, e.g. Flammable Goods N.O.S. (Not otherwise specified), UN 1993
Hazardous Substance	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc.
HSNO Act	Hazardous Substance and New Organisms Act – limits and manages the transaction of hazardous substances in New Zealand and her territories.
SUMMARY INFORMATION ONLY	

1. IDENTIFICATION

Product Name: Acetone
Other Names: 2-propanone, dimethyl ketone
Chemical Family: Ketones
Molecular Formula: C₃H₆O
Recommended Use: Industrial chemical
Supplier: Australasian Solvents and Chemicals Company Pty. Ltd
Address: PO Box 8340, Symonds Street, Auckland, N.Z.
Telephone: 0800 754 767
Emergency phone: CHEMCALL: 0800 243 622
All other inquiries: 0800 754 767

2. HAZARDS IDENTIFICATION

Product is classified as hazardous according to Schedules 1 to 6 of the *Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001* of the HSNO Act, 1996.

HSNO Classifications: 3.1B, 6.1E, 6.3B, 6.4A
Signal word: DANGER

Hazard Statements :

H225 Highly flammable liquid and vapour
H316 Causes mild skin irritation
H304 May be harmful if swallowed
H320 Causes eye irritation

Precaution Statements :

P210 Keep away from ignition sources such as heat, sparks, open flame and hot surfaces. No smoking.
P233 Keep container tightly closed
P241 Use explosion-proof electrical, ventilating and lighting equipment
P264 Wash hands thoroughly after using
P240 Ground container and receiving equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P280 Wear protective gloves, protective clothing and eye protection

3. COMPOSITION : Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%v/v)
Acetone	67-64-1	> 99.5
Water	7732-18-5	< 0.5

4. FIRST AID MEASURES

For advice, contact National Poison Centre (Phone New Zealand: 0800 764 766) or a doctor.

Swallowed

If swallowed, do not induce vomiting. Give a glass of water if person is conscious. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.

Skin Contact

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. For advice, contact the National Poisons Centre (0800 746 766) or a doctor.

Eye Contact

Hold eyelids apart and flush the eye continuously with running water. Continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Inhalation

Move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

First Aid facilities

Provide eye baths and safety showers close to areas where splashing may occur.

Medical Attention

Treat according to symptoms. Gastric lavage may be indicated if ingested. Do not wait for symptoms to develop. General measures should be taken to control acidosis and maintain urine output.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing fire-fighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media :

Dry chemical or foam

Hazards from combustion products:

Carbon dioxide and carbon monoxide

Precautions for fire fighters and special protective equipment:

Full protective clothing and self-contained breathing apparatus

Hazchem Code: 2YE

6. ACCIDENTAL RELEASE MEASURES**Emergency Procedures:**

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

Methods and materials for containment***Major Land Spill***

- Eliminate sources of ignition.
- Warn occupants of downwind areas of possible fire and explosion hazard.
- Prevent liquid from entering sewers, watercourses, or low-lying areas.
- Keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.
- Take measures to minimize the effect on the ground water.
- Contain the spilled liquid with sand or earth.
- Recover by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See “First Aid Measures” and “Stability and Reactivity”

Major Water Spill

- Eliminate any sources of ignition.
- Warn occupants and shipping in downwind areas of possible fire and explosion hazard.
- Notify the port or relevant authority and keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Confine the spill if possible.
- Remove the product from the surface by skimming or with suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See “First Aid Measures” and “Stability and Reactivity”.

7. HANDLING AND STORAGE**Precautions for safe handling:**

Unless locked up, product to be under the control of an Approved Handler when present in quantities greater than 250 L (when in containers > 5 L) or 500 L (when in containers up and including 5 L).

This product is Highly Flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Use grounding leads to avoid discharge (electrical spark).

Conditions for safe storage:

Store in a cool, dry place away from direct sunlight. Do not pressurize, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress.

Incompatible materials:

Natural Rubber, Butyl Rubber, EPDM, Polystyrene

8. EXPOSURE CONTROLS : PERSONAL PROTECTION**Health Exposure Standards:**

The following Tolerable Exposure Limit (TEL) Workplace Exposure Standards (WES), 2002 have been set by the Occupational Safety and Health Service , NZ Department of Labour for components in this substance:

	WES-TWA		WES-STEL	
Acetone (bio)	500 ppm	1185 kg/m ³	1000 ppm	2375 mg/m ³

Biological limit values :

None established

Engineering Controls:***Ventilation:***

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment:

Respiratory Protection: Where concentrations in air may exceed the limits described in the National Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type "A" filter material is considered suitable for this product.

Eye Protection: Always use safety glasses or a face shield when handling this product.

Skin/ Body Protection: Always wear long sleeves and long trousers or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, colourless liquid
Boiling Point/Range	°C	56
Flash Point	°C	-17
Density @ 15°C	g/ml	0.792
Vapour Pressure @ 20°C	mm Hg	180
Vapour Density @ 20°C	kPa	Not available
Vapour threshold	ppm	100 -140
Autoignition Temperature	°C	465
Explosive Limits in Air	%	2.2 - 13
Viscosity	cSt	Not available
Volatiles	%	100
Solubility in Water	% w/w	Miscible

The values listed are indicative of this product's physical and chemical properties.
For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY

- Chemical Stability:** Stable at room temperature and pressure.
- Conditions to avoid:** Sources of heat and ignition, open flames.
- Hazardous decomposition products:** No decomposition products except on burning. See "Fire Fighting Measures".
- Hazardous reactions:** Oxidizing agents, strong alkalis and strong mineral acids and bromine.

11. TOXICOLOGICAL INFORMATION**Acute Effects*****Ingestion***

This product will cause irritation to the throat, trachea and respiratory tract. It may cause nausea. Swallowing large amounts will have a narcotic effect: headaches, dizziness, euphoria, loss of appetite and possible loss of consciousness. Vomiting may cause the product to be aspirated into the lungs resulting in chemical pneumonitis.

Eye Contact

Liquid may cause moderate to severe eye irritation and corneal damage. Exposure to vapour concentrations of 500 -1000 ppm usually results in irritation to eyes.

Skin Contact

Brief contact may cause mild irritation. Prolonged or repeated exposure may cause defatting resulting in dryness or cracking of the skin (irritant contact dermatitis). Due to its low toxicity and high volatility, this product is unlikely to be absorbed through the skin in harmful amounts unless evaporation is prevented.

Inhalation

Vapour concentrations above 500 ppm are irritating to the nose and throat. High vapour concentrations (above 1000 ppm) result in narcotic effects including possible headaches, dizziness, loss in coordination, nausea, loss of appetite and possible loss of consciousness.

Chronic Effects

Repeated or prolonged skin contact with the liquid may cause irritant contact dermatitis. A study of 800 workers occupationally exposed to acetone vapour (600 – 2150 ppm) over an 18 year period revealed no significant health effects compared to unexposed workers.

Other Health Effects Information:

Exposure to this product potentiates (greatly enhances) the liver and kidney toxicity of chlorinated hydrocarbon solvents such as trichloroethylene and chloroform. Fasting and diabetes increases the normal levels of acetone in the body. Dieters and diabetics exposed to levels of acetone may feel overexposure effects at lower levels of

occupational exposure. Exposure to high concentrations of acetone may aggravated pre-existing skin, respiratory, blood, liver, kidney and reproductive disorders in humans.

Toxicological Information:

Oral LD50 rat	5.8 – 8.4 g/kg
Oral LD50 mouse	3.0 g/kg
Dermal LD50 rabbit	20 g/kg
Inhalation LC50 (4hr) rat	32,000 ppm

12. ECOLOGICAL INFORMATION**Ecotoxicity:*****Aquatic toxicity:***

Fish (rainbow trout, goldfish, blue gill sunfish)	LC50 (96hr)	5000 – 13000 mg/L
<i>Daphnia magna</i>	EC50 (48hr)	<10000mg/L
Blue green algae	EC50 (7-8d)	13500 mg/L
Green algae	EC50 (7-8d)	530 mg/L

Persistence/degradability: Degrades by photooxidation in air, with low photochemical ozone creation potential. This product can be removed from air by rainfall. Considered to be readily biodegradable. If released into water, this product will dissolve and volatilize at a slow but significant rate. Biodegradation will occur in surface water.

Mobility: In soil, this product will evaporate and leach readily in most soil types. Acetone has negligible tendency to bioaccumulate.

Environmental Exposure Standards:

EEL (WATER):	Not set
EEL (SOIL)	Not set
EEL (SEDIMENTS)	Not set

13. DISPOSAL CONSIDERATIONS**Disposal Methods:**

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain fumes and vapours that are flammable and harmful. Ensure that empty packaging is allowed to dry.

Special Precautions for Landfill or Incineration:

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be burned directly in appropriate equipment.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1090	UN No.	1090	UN No.	1090
Proper Shipping Name	Acetone	Proper Shipping Name	Acetone	Proper Shipping Name	Acetone
DG Class	3	DG Class	3	DG Class	3
Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Pack Group	II	Pack Group	II	Pack Group	II
Hazchem	2YE	Hazchem	2YE		

Dangerous Goods Segregation

This product is classified as Dangerous Goods Class 3, packing group III. Please consult the Land Transport Rule: Dangerous Goods 2005, and NZS 5433:2007 Transport of Dangerous Goods on Land for information.

15. REGULATORY INFORMATION

Country/ Region: Australia, New Zealand

Inventory: AICS, NZCIL

Status: Listed

ERMA New Zealand Approval Code: HSR001070 Acetone

HSNO Controls: Codes: F1 - F6, F11, F12, F14, F16, T1, T2, T4, T7, P1, P3, P5, PI3, PG2, D2, D4, D6 - D8, AH1, EM1, EM6, EM8 - EM13, I1, I5, I8, I9, I11, I13, I16 I19, I21, I25, I28 - I30, GN35A.

Refer to www.ermanz.govt.nz for information on Controls.

16. OTHER INFORMATION

Reasons for Issue: Correction to molecular formula.

Replaces Safety Data Sheet dated 24 March, 2009.

Abbreviations:

AICS: Australian Inventory of Chemical Substances

NZCI: New Zealand Chemical Inventory

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

NOHSC: National Occupational Health and Safety Council

References:

Supplier Material Safety Data Sheets

Sax's Dangerous Properties of Industrial Materials, Richard J. Lewis Snr., pub. Canada (2000)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Australasian Solvents and Chemicals Company (NZ) Pty. Ltd.