

FOR FURTHER INFORMATION, PLEASE REFER TO THE SDS FOLLOWING

Issue: December 2022

PRODUCT: Acetone
Other Names: 2-propanone, dimethyl ketone
Uses: Coatings formulations, laboratory reagent, cleaning fluids, etc.
Signal Word: DANGER

UN No.	1090
Dangerous Goods Class	3
Subsidiary Risk	None
Pack Group	II
Hazchem	•2YE

Hazardous Nature:	This product is classified as hazardous under GHS (7th revised edition) in accordance with the model WHS Regulations
Hazardous Classification:	Flammable liquids, Cat. 2; Eye irritation, Cat. 2; Specific target organ toxicity - single exposure, Cat. 3 (narcotic effects)
Poisons Schedule:	5
AU Exposure Standards:	TWA: 1185 mg/m ³ (500 ppm); STEL: 2375 mg/m ³ (1000 ppm)

Physical Characteristics (Typical)

Section 9 of SDS

Appearance	Colourless liquid
Boiling Point/ Range (°C):	56
Flash Point (°C):	-20
Density (g/mL):	0.79
Chemical Stability:	Stable at room temperature and pressure

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 full SDS.

GHS Pictograms

Section 2 of SDS



For further risk and safety information, please refer to the full SDS.

DEFINITIONS

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, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993. Products not classed as Dangerous Goods are designated as not regulated for transport or N/R (non-regulated).
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. Materials classified with risks such as potential for misuse, like flammability, or explosions when heated and ignited, may be both classed as Dangerous Goods and Hazardous Substances.

1. IDENTIFICATION

Product Name:	Acetone
Other Names:	2-propanone, dimethyl ketone
Chemical Family:	Ketones
Recommended Use:	Coatings formulations, laboratory reagent, cleaning fluids, etc.
Supplier:	Australasian Solvents and Chemicals Company Pty. Ltd.
ABN:	57 095 441 080
Street Address:	4/3950 Pacific Highway, Loganholme, QLD 4129
Telephone:	(07) 3209 7250
Fax:	(07) 3209 8829
Emergency phone:	CHEMCALL: 1800 127 406
All other inquiries	Queensland: 1800 684 989 Victoria: 1800 500 507

2. HAZARDS IDENTIFICATION**Hazardous Nature**

This product is classified as hazardous under GHS (7th revised edition) in accordance with the model WHS Regulations

Hazardous Classification

Flammable liquids, Cat. 2; Eye irritation, Cat. 2; Specific target organ toxicity - single exposure, Cat. 3 (narcotic effects)

GHS Pictograms

Signal Word DANGER

Dangerous Goods Classification: 3

Hazard Statements

H225: Highly flammable liquid and vapour

H319: Causes serious eye irritation

H336: May cause drowsiness or dizziness

AUH066: Repeated exposure may cause skin dryness or cracking

Precautionary Statements

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/.../equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges

P261: Avoid breathing mist/vapours/spray.

P264: Wash hands and face thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/clothing and eye/face protection.

Response Statements

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER/ doctor/.../if you feel unwell.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337 + P313: If eye irritation persists get medical advice/attention.

P370 + P378: In case of fire: Use dry chemical, carbon dioxide, foam, water spray or fog to extinguish

Storage Statements

P403+P233: Store in a well ventilated place. Keep container tightly closed.

P235: Keep cool..

P405: Store locked up.

Disposal Statements

P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

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 Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

Inhalation

Move the victim to fresh air and keep at rest in a position comfortable for breathing. Begin artificial respiration if breathing has stopped. Seek medical attention

Skin/Hair Contact

If skin or hair contact occurs, wash with large amounts of running water. Seek medical attention if any irritation occurs.

Eye Contact

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

Ingestion

If swallowed, do not induce vomiting. Give a glass of water to drink, if conscious. Never give anything by mouth to an unconscious person. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Seek medical attention.

Most Important Symptoms and Effects

Irritating to eyes

First Aid facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms

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 firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable Extinguishing Media

Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

Specific Hazards Arising from the Material

Flashback is possible over considerable distance. Vapours may form explosive mixtures with air.

Hazards from combustion products

Carbon monoxide, carbon dioxide, other pyrolysis products typical of burning organic material.

Fire-fighting Precautions

No specific precautions advised.

Special Protective Equipment

Full protective clothing and self contained breathing apparatus

Hazchem Code: •2YE

6. ACCIDENTAL RELEASE MEASURES**Emergency Procedures**

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

Personal Precautions

Keep people away and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours, spray or mist from spilled material. Ensure adequate ventilation of spill area.

Environmental Precautions

Do not allow spilled material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods and Materials for Containment

Soak up with inert absorbent material and dispose of as hazardous waste.

Major land spill

- Eliminate sources of ignition
- Warn occupants of downwind areas of possible fire/explosion or toxicity hazard
- Prevent product 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 minimise the effect on ground water
- Contain any spilled liquid with sand or earth
- Recover liquid spills by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material
- Recover solid spills by mechanical collection methods; cover and prevent dusts or particles from spreading – consider wetting the product down, without diluting it – and vacuum or sweep up
- 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/explosion or toxicity 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**

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. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Take precautionary measures against static discharges. Ensure all equipment is electrically grounded before beginning transfer operations. Use explosion-proof equipment.

Conditions for safe storage

Store in a cool, dry and well ventilated place away from direct sunlight. Keep container tightly closed.

Storage compatibility

Painted surfaces, natural rubber, polystyrene, EDPM, neoprene

See also: Section 10 – Stability and Reactivity for further information on incompatible materials

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Standards**

Australia: *Workplace Exposure Standards for Airborne Contaminants, 16 December 2019*

TWA: 1185 mg/m³ (500 ppm)

STEL: 2375 mg/m³ (1000 ppm)

Advisory information None

New Zealand: *Workplace Exposure Standards and Biological Exposure Indices, Edition 13: April 2022*

TWA:	1185 mg/m ³ (500 ppm)
STEL:	2375 mg/m ³ (1000 ppm)
Advisory information	None

International:

Singapore PELs (2006): TWA 1780 mg/m³ (750 ppm); STEL 2380 mg/m³ (1000 ppm)

The time weighted average (TWA) exposure standard is the highest allowable average airborne concentration of a particular substance when calculated over an eight-hour working day.

The short-term exposure limit (STEL) exposure standard is the maximum allowable exposure concentration for a substance during any 15-minute period in the working day.

Products may be identified as carcinogens, respiratory or skin sensitisers, or easily absorbed to the skin according to the below notations.

Carc 1A: Known to have carcinogenic potential for humans

Carc. 1B: Presumed to have carcinogenic potential for humans

Carc. 2: Suspected human carcinogen

6.7A/Carcinogen Category 1: Known or presumed human carcinogen

6.7B/Carcinogen Category 2: Suspected human carcinogen

Sk/Skin: Substance is considered to have potential for significant skin absorption, risking overexposure

Oto: Substance can cause hearing loss. This may be in conjunction with noise exposure or without concurrent noise exposure. Risk may be via inhalation or skin absorption.

Sen: Substance is identified as having potential to cause respiratory and/or dermal sensitisation – an allergic reaction or hypersensitivity affecting skin (dsen) or respiratory system (rsen). High exposure may hasten the onset of the allergy, but once developed in an individual, very low exposures can provoke a significant reaction.

Biological Limit Values

50 mg/L acetone in urine at end of shift

Engineering Controls

Provide sufficient air exchange and/or exhaust in work rooms.

Personal Protective Equipment

Respiratory protection: Use a filter mask suitable for organic gases and vapours (boiling point < 65 °C). Use a full-face mask.

Where air-filtering respirators are unsuitable, e.g. airborne concentrations are high, risk of oxygen deficiency, then use an appropriate positive pressure breathing apparatus

Recommended filter type: Type A filter material (organic vapour)

Refer to AS/NZS 1715: *Selection, Use and Maintenance of Respiratory Equipment* and AS/NZS 1716: *Respiratory Protective Devices* for further details on the use of respiratory protective equipment.

Eye protection: Wear safety glasses with side-shields

Skin/ body protection: Wear protective clothing with long sleeves and safety shoes. Wear gloves suitable for permanent contact. Recommended glove material: butyl rubber; Break through time: 4 h; Material thickness: 0.5 mm

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Colourless liquid
Odour	-	Characteristic
Odour threshold	ppm	Not available
Melting Point/Freezing Point	°C	-95
Boiling Point/ Range	°C	56
Flash Point	°C	-20
Flammability	-	Highly flammable
Explosive Limits (LEL – UEL)	%	2.6 – 12.8
Vapour Pressure @ 25°C	hPa	307
Vapour Density	kPa	2
Density	g/mL	0.79
Autoignition Temperature	°C	465
Decomposition Temperature	°C	Not available
pH	-	Not available
Kinematic Viscosity	cSt	Kinematic: 0.4

Property	Unit of measurement	Typical value
Dynamic Viscosity:	mPa.s	0.32
Solubility with Water	% w/w	Soluble
Other Solubility	% w/w	Not available
Partition Coefficient: n-octanol/water	-	Not available
Particle Characteristics	-	Not available
Percent Volatiles	%	100
Other Information	-	-

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

Reactivity

No reactivity hazards identified

Chemical Stability

Stable at room temperature and pressure

Conditions to Avoid

Extremes of temperature and direct sunlight. Heat, flames and sparks.

Incompatible materials

Strong oxidising agents, acids, halogenated compounds

Hazardous Decomposition Products

Carbon oxides

Hazardous Reactions

Reactive with strong oxidising agents, strong alkalis and strong mineral acids and bromine.

Hazardous Polymerisation

Will not occur

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

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

Inhalation

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

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.

Eye Contact

Liquid may cause moderate to severe eye irritation and corneal damage. Most subjects exposed to vapour concentrations of 500 - 1000 ppm experience irritation to the eyes.

Chronic Effects

Repeated or prolonged skin contact with the liquid may cause irritant contact dermatitis. A study of 800 workers occupationally exposed to these vapours (600 - 2150 ppm) over an 18 year period revealed no significant adverse health effects compared with 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 aggravate pre-existing skin, respiratory, blood, liver, kidney and reproductive disorders in humans.

Toxicological Information

Acute Toxicity - Oral: Not classified as acutely toxic by ingestion

LD₅₀: >2000 mg/kg (rat)

Acute Toxicity – Dermal: Not classified as acutely toxic by skin contact

LD₅₀: >2000 mg/kg (rat)

Acute Toxicity – Inhalation: Not classified as acutely toxic by inhalation

LC₅₀: >20 mg/L/4 h (rat, vapour)

Skin Corrosion/Irritation: Not classified

Serious Eye damage/irritation: Causes serious eye irritation

Respiratory or Skin Sensitisation: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (STOT) – Single Exposure: Not classified

Specific Target Organ Toxicity (STOT) – Repeated Exposure: Not classified

Aspiration Hazard: Not classified

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity

Not classified as hazardous to the aquatic environment.

Fish toxicity: No data available

Crustacean toxicity: >100 mg/L/48 h (daphnia magna, static test)

Algae toxicity: No data available

Terrestrial Ecotoxicity

Not classified as hazardous to the terrestrial environment

Persistence/Degradability

Considered as readily biodegradable. If released to water, this product will dissolve and volatilise at a slow but significant rate. Biodegradation will occur in surface water.

Bioaccumulative Potential

Material is not expected to bioaccumulate significantly

Mobility in Soil

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

Other adverse effects

No additional adverse effects identified

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Disposal of hazardous waste must be carried out in compliance with all applicable regional and national regulations. This product is NOT suitable for disposal by domestic landfill or via municipal sewers, drains, natural streams or rivers. It must be disposed as chemical waste in accordance with the local authority.

Care should be taken to ensure compliance with national and local authorities.

Refer to Section 8 of this SDS for precautions before carrying out disposal or recycling activities.

Product Disposal

Dispose of product as chemical waste via a licenced service provider.

Packaging Disposal

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 harmful residue and/or fumes and vapours that are flammable. Ensure that empty packaging is allowed to dry

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
(ADG)		(IMDG)		(IATA)	
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
Packing Group	II	Packing Group	II	Packing Group	II

Dangerous Goods Segregation

This product is classified as Dangerous Goods Class 3, packing group II.

Please consult the *Australian Dangerous Goods Code for Transport by Road and Rail* (ADG Code Edition 7.7, 2020) for further information.

**Environmental Hazards**

Marine Pollutant: No

Special Precautions

-

Additional Information

-

Hazchem Code:**Marpol 73/78 Convention – Annex II**

Product Name: Acetone

Ship Type: Not determined

Pollution: Z

15. REGULATORY INFORMATION

Country/ Region: Australia

Inventory: Australian Inventory of Industrial Chemicals (Inventory)

Status: Listed in AICIS Inventory

Poisons Standard:

If this material is made available to the public it must be packaged and labelled in accordance with the current Poisons Standard (SUSMP)

Schedule: 5

Agricultural Compounds and Veterinary Medicines Act 1997 (ACVM)

Not applicable

International Agreements

Montreal Protocol on Substances that Deplete the Ozone Layer: Not applicable

Stockholm Convention: Not applicable

Rotterdam Convention: Not applicable

Basel Convention: Not applicable

International Inventory Status:

New Zealand Inventory of Chemicals (NZIoC): Listed in NZIoC

International Inventories:

Listed in:

Canada. DSL - Domestic Substances List, part of CEPA

Japan. ENCS - Existing and New Chemical Substances Inventory

Japan. Industrial Safety and Health Law - Inventory

Korea. KECL - Korean Existing Chemicals Inventory

Philippines. PICCS - Philippines Inventory of Chemicals and Chemical Substances

China. IECSC - Inventory of Existing Chemical Substances in China

Taiwan. Chemical Substances Inventory (TCSI)

USA TSCA Inventory

16. OTHER INFORMATION

SDS Version Number: 2.0

Reasons for Issue: Update to GHS v7

Replaces SDS dated: 14 October 2020

New SDS issue date: 13 December 2022

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists

AICIS: Australian Industrial Chemicals Introduction Scheme

AICS: Australian Inventory of Chemical Substances

AS/NZS: Standards Australia & Standards New Zealand

BCF: Bioconcentration Factor

BEI: Biological Exposure Index

CAS: Chemical Abstracts Service

CCID: Chemical Classification and Information Database

EC₅₀: Effective Concentration, 50 per cent

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GHS 7: Globally Harmonized System of Classification and Labelling of Chemicals Revision 7, as implemented by the *Model Work Health and Safety Regulations (Hazardous Chemicals) Amendment 2020*

IARC: International Agency for Research on Cancer

IC₅₀: Half Maximal Inhibitory Concentration

LC₅₀: Lethal Concentration, 50 per cent

LD₅₀: Lethal Dose, 50 per cent

LEL: Lower Explosive Limit

LOAEL: Lowest-observed-adverse-effect level

N/R: Not Regulated

NOAEL: No-observed-adverse-effect-level

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

STEL: Short-Term-Exposure Limit

SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons (Poisons Standard)

TLV: Threshold Limit Value

TWA: Time-Weighted Average

WHS (model WHS Regulations): model Work Health and Safety Regulations

WES: Workplace Exposure Standard

UEL: Upper Explosive Limit

References:

- Supplier Safety Data Sheets

- AICIS Chemical Information <https://www.industrialchemicals.gov.au/chemical-information>
- Safe Work Australia: Hazardous Chemical Information System (HCIS) <http://hcis.safeworkaustralia.gov.au/HazardousChemical>
- Workplace Exposure Standards for Airborne Contaminants (16 December 2019), published by Safe Work Australia <https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards-airborne-contaminants>
- US NLM ChemIDPlus: <https://chem.nlm.nih.gov/chemidplus/>
- OECD eChemPortal Substance Search <https://www.echemportal.org/echemportal/>

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 Pty. Ltd.