

Infosafe No™ 1CHGJ	Issue Date : September 2022	RE-ISSUED by CHEMSUPP
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 Product Name **ACETIC ANHYDRIDE AR**

Classified as hazardous

## Section 1 - Identification

<b>Product Identifier</b>	ACETIC ANHYDRIDE AR								
<b>Company Product Codes / Numbers / Unique Identifiers</b>	AA069								
<b>Company Name</b>	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)								
<b>Address</b>	38 - 50 Bedford Street GILLMAN SA 5013 Australia								
<b>Telephone/Fax Number</b>	Tel: (08) 8440-2000								
<b>Emergency Phone Number</b>	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)								
<b>E-mail Address</b>	www.chemsupply.com.au								
<b>Recommended use of the chemical and restrictions on use</b>	Cellulose acetate fibres and plastics, vinyl acetate, dehydrating and acetylating agent in production of pharmaceuticals, dyes, perfumes, explosives, aspirin, esterifying agent for food starch and laboratory reagent.								
<b>Other Names</b>	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>Name</u></th> <th style="text-align: right;"><u>Product Code</u></th> </tr> </thead> <tbody> <tr> <td>ACETIC ANHYDRIDE</td> <td></td> </tr> <tr> <td>Acetyl oxide</td> <td></td> </tr> <tr> <td>Acetic oxide</td> <td></td> </tr> </tbody> </table>	<u>Name</u>	<u>Product Code</u>	ACETIC ANHYDRIDE		Acetyl oxide		Acetic oxide	
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ACETIC ANHYDRIDE									
Acetyl oxide									
Acetic oxide									

### Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

## Section 2 - Hazard(s) Identification

<b>GHS Classification of the Substance/Mixture</b>	Flammable Liquids: Category 3 Acute Toxicity - Inhalation: Category 2 Acute Toxicity - Oral: Category 4 Skin Corrosion/Irritation: Category 1B Eye Damage/Irritation: Category 1
<b>Signal Word</b>	DANGER
<b>Hazard Statement (s)</b>	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled.
<b>Pictogram (s)</b>	Flame, Corrosion, Skull and crossbones



<b>Precautionary Statement - Prevention</b>	P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. P242 Use only non-sparking tools.
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<b>Precautionary Statement – Response</b>	<p>P243 Take precautionary measures against static discharge.  P260 Do not breathe dust/fume/gas/mist/vapours/spray.  P264 Wash thoroughly after handling.  P270 Do not eat, drink or smoke when using this product.  P271 Use only outdoors or in a well-ventilated area.  P280 Wear protective gloves/protective clothing/eye protection/face protection.  P284 Wear respiratory protection.  P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  P363 Wash contaminated clothing before reuse.  P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  P310 Immediately call a POISON CENTER or doctor/physician.  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  P370+P378 In case of fire: Use CO2, dry chemical, dry sand or alcohol foam for extinction.</p>
<b>Precautionary Statement – Storage</b>	<p>P403+P235 Store in a well-ventilated place. Keep cool.  P405 Store locked up.</p>
<b>Precautionary Statement – Disposal</b>	<p>P501 Dispose of contents/container according to local, state and federal regulations.</p>

### Section 3 - Composition and Information on Ingredients

<b>Ingredients</b>	<b><u>Name</u></b>	<b><u>CAS</u></b>	<b><u>Proportion</u></b>
	Acetic anhydride	108-24-7	100 %
<b>Other Information</b>	The chief impurity is acetic acid.		

### Section 4 - First Aid Measures

<b>First Aid Measures</b>	Symptoms of poisoning may even occur after several hours.
<b>Inhalation</b>	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
<b>Ingestion</b>	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.
<b>Skin</b>	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If rapid recovery does not occur, obtain medical attention
<b>Eye</b>	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
<b>First Aid Facilities</b>	Maintain eyewash fountain and drench facilities in work area.
<b>Advice to Doctor</b>	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
<b>Other Information</b>	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

### Section 5 - Firefighting Measures

<b>Specific Methods</b>	<p>Small fire: Use CO2, dry chemical, dry sand or alcohol foam. If safe to do so, move undamaged containers from the fire area.  Large fire: Use alcohol foam, fog or water spray - Do NOT use water jets.  Fight fire from protected position or use unmanned hose holders or monitor nozzles.  Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.</p>
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**Specific Hazards Arising from the Chemical** FLAMMABLE. Will be easily ignited by heat, sparks or flame. Vapours will form explosive mixtures with air. Vapour may travel to source of ignition and flash back. Containers may explode when heated or contaminated with water. Fire will produce irritating, poisonous and/or corrosive gases. Vapours from run-off may create an explosion hazard.

**Hazchem Code** 2W

**Precautions in connection with Fire** Wear SCBA and acid-resistant chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

## Section 6 - Accidental Release Measures

**Spills & Disposal** Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. All equipment used when handling the product must be earthed. Do NOT touch or walk through spilled material. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour-suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapour clouds. DO NOT GET WATER INSIDE CONTAINERS.  
Small spill: Cover with DRY earth, sand or other non-combustible material followed by a plastic sheet to minimize spreading or contact with rain. Use clean, non-sparking tool to collect material and place it into loosely-covered plastic containers for later disposal.

**Personal Precautions** Avoid inhalation, contact with skin, eyes and clothing. Evacuate the area of all non-essential personnel.

**Personal Protection** Wear protective clothing specified for normal operations (see Section 8)

**Clean-up Methods - Small Spillages** Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

## Section 7 - Handling and Storage

**Precautions for Safe Handling** Ground drums and bond transfer containers. Keep away from water. Avoid generating and inhaling vapour/mist.

**Conditions for safe storage, including any incompatibilities** Store in cool place and out of direct sunlight. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidizing agents. Keep containers closed at all times.  
Store away from alkalis, water and products containing water.

**Corrosiveness** Causes corrosion to stainless steels, nickel alloys and aluminum alloys.

**Storage Regulations** Refer Australian Standard AS 3780 - 1994 'The Storage and Handling of Corrosive Substances'.  
Refer Australian Standard AS 1940-2004 'The storage and handling of flammable and combustible liquids'.

## Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limit (OEL) Values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Acetic anhydride			21	5	Peak limitation

**Other Exposure Information** A time weighted average (TWA) has been established for acetic anhydride (Safe Work Australia) of 21 mg/m3, (5 ppm) PEAK LIMITATION.  
For some rapidly acting substances and irritants, the averaging of the airborne concentration over an eight-hour period is inappropriate. These substances may induce acute effects after relatively brief exposure to high concentrations and so the exposure standard for these substances represents a maximum or peak concentration to which workers may be exposed. Although it is recognised that there are analytical limitations to the measurement of some substances, compliance with these 'peak limitation' exposure standards should

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<b>Engineering Controls</b>	be determined over the shortest analytically practicable period of time, but under no circumstances should a single determination exceed 15 minutes. Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.
<b>Respiratory Protection</b>	Where sufficient ventilation is not available, avoid breathing dusts by wearing an AS 1716 approved P1 or P2 particulate filter respirator. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.
<b>Eye and Face Protection</b>	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
<b>Hand Protection</b>	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
<b>Personal Protective Equipment</b>	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
<b>Footwear</b>	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
<b>Body Protection</b>	Clean impervious clothing should be worn, preferably with an apron for extra protection. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
<b>Hygiene Measures</b>	Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material.

## Section 9 - Physical and Chemical Properties

<b>Form</b>	Liquid
<b>Appearance</b>	Colourless liquid.
<b>Odour</b>	Strong.
<b>Melting Point</b>	-73.1 °C
<b>Boiling Point</b>	139.55°C
<b>Solubility in Water</b>	136 g/l.
<b>Solubility in Organic Solvents</b>	Miscible with alcohol, ether and acetic acid.
<b>Specific Gravity</b>	1.082 @ 20 °C
<b>pH</b>	Reacts with water to form strongly acidic solution.
<b>Vapour Pressure</b>	5.4 mm Hg at 25.4 °C 5 hPa @ 20 °C
<b>Relative Vapour Density (Air=1)</b>	3.5 (air = 1)
<b>Flash Point</b>	49 °C
<b>Flammability</b>	Flammable liquid. Keep away from heat, sparks or naked flames. Use flameproof equipment and fittings to prevent flammability risk. Electrically link and ground metal containers for transfer of the product to prevent accumulation of static electricity. Ensure adequate ventilation to prevent an explosive vapour-air mixture. Vapours will travel considerable distances to sources of ignition.

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<b>Auto-ignition Temperature</b>	316°C
<b>Flammable Limits - Lower</b>	2.0%
<b>Flammable Limits - Upper</b>	10.2%
<b>Molecular Weight</b>	102.09

## Section 10 - Stability and Reactivity

<b>Chemical Stability</b>	Normally stable. Reacts with water and water vapour to form acetic acid.
<b>Possibility of Hazardous Reactions</b>	Reacts with water to form acetic acid, which can catalyse further hydrolysis, leading to explosive boiling. Reacts violently with alkalis. Strong mineral acids, organic acids and inorganic oxidising substances will cause rapid hydrolysis of acetic anhydride accompanied by a temperature and pressure rise. The reaction can be sufficiently rapid and violent to cause an explosion. Reacts with organic oxidising substances to form reactive flammable or explosive compounds (e.g. hydrogen peroxide) and oxidising agents (aldehydes and ketone).
<b>Incompatible Materials</b>	Water, alkalis, strong mineral acids, organic acids and oxidising agents.
<b>Hazardous Decomposition Products</b>	Carbon monoxide and carbon dioxide.
<b>Hazardous Polymerization</b>	Does not occur.

## Section 11 - Toxicological Information

<b>Toxicology Information</b>	LD50 (oral, rat): 630 mg/kg LC100 (inhalation, rat): 400 ppm - 6 hour exposure LD50 (dermal, rabbit): 4000 mg/kg
<b>Ingestion</b>	Harmful if swallowed. May damage the delicate tissues lining the mouth, throat and oesophagus with immediate pain and difficulty in swallowing. Ulceration of tissues may develop. Healing may be slow (weeks to months). May cause gastric pain, nausea, vomiting, haemorrhaging, circulatory collapse and death.
<b>Inhalation</b>	Can be fatal if inhaled. Vapour may cause irritation of the nose and throat. High concentrations may cause coughing, choking and wheezing.
<b>Skin</b>	Vapour and liquid causes burns. The liquid can quickly cause tissue destruction, leaving white coloured necrotic (dead) tissue.
<b>Eye</b>	Causes burns. Risk of serious damage to eyes. Vapour may cause eye irritation, reddening of the eyes, light sensitivity and lachrymation. Liquid and high vapour concentrations may cause immediate burning sensation, followed by increasingly severe damage to the cornea and conjunctiva. Permanent clouding (opacity) of the cornea may develop, but may be reversible in mild cases.
<b>Chronic Effects</b>	Prolonged exposures at high vapour concentrations may cause necrosis of nose and throat tissue and severe pulmonary edema. Repeated or prolonged exposure to high concentrations of vapour or liquid to the skin may cause chronic dermatitis.

## Section 12 - Ecological Information

<b>Ecological Information</b>	Adverse ecological effects cannot be excluded in the event of improper handling or disposal.
<b>Bioaccumulative Potential</b>	No bioaccumulation is to be expected (log Pow <=4).

## Section 13 - Disposal Considerations

<b>Disposal Considerations</b>	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
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## Section 14 - Transport Information

**Transport Information** Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:  
Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity.

**ADG UN Number** 1715

**ADG Proper Shipping Name** ACETIC ANHYDRIDE

**ADG Transport Hazard Class** 8

**ADG Subsidiary Hazard** 3

**ADG Packing Group** II

**Hazchem Code** 2W

**EPG Number** 8B1

**IERG Number** 38

## Section 15 - Regulatory Information

**Poisons Schedule** S6

**Packaging & Labelling** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 131126 (Australia). If swallowed do not induce vomiting. Give a glass of water. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

## Section 16 - Any Other Relevant Information

**Literature References** Australian Health Ministers' Advisory Council, 'Standard for the Uniform Scheduling of Drugs and Poisons No.14', AGPS, Canberra 1999.  
Lewis, Richard J. Sr.'Hawley's Condensed Chemical Dictionary 12th. Ed.', Rev., Van Nostrand Reinhold, NY, 1993.  
National Road Transport Commission, 'Australian Dangerous Goods Code 6th. Ed.', AGPS, Canberra, 1998.  
South Australia Government, 'Approved Code of Practice for the Labelling of Workplace Substances', 1995.  
Standards Australia, 'Dangerous Goods - Initial Emergency Response Guide', 1997.  
Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]', AGPS, Canberra 1999.  
Worksafe Australia, 'List of Designated Hazardous Substances [NOHSC:10005(1999)]', AGPS, Canberra 1999.  
Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]', AGPS, Canberra 1994.  
Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]', AusInfo Dept of Finance and Admin, Canberra 1995.

**Contact Person/Point** Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**  
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**Empirical Formula** C<sub>4</sub>H<sub>6</sub>O<sub>3</sub>

**& Structural  
Formula**

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