

**MATERIAL SAFETY DATA SHEET**  
**ACETONE**
**1. Identification of the Product and Company**

<b>Product Name:</b>	<b>ACETONE</b>
<b>Product Code:</b>	ACE00731F
<b>Other Names:</b>	2-Propanone, Dimethyl ketone
<b>Use:</b>	Pharmaceutical solvent.
<b>Company Name &amp; Contact Details</b>	Drug Information Pharmacist ORION Laboratories Pty Ltd ABN 56 009 293 136 25-29 Delawney Street, Balcatta, Western Australia 6021 AUSTRALIA <b>Telephone (all hours): +618 9441 7800</b> FREE PHONE: 1800 805 546 FREE FAX: 1800 004 110 EMAIL: customerservice@orion.net.au; WEBSITE: www.orion.net.au
<b>Other Information</b>	ORION® is a registered trademark of Orion Laboratories Pty Ltd All reasonable care has been taken to ensure information and advice contained in this data sheet is accurate at time of printing. However, Orion accepts no liability for any loss or damages suffered as a consequence of reliance on the information contained herein.

**2. Hazards Identification**

<b>Hazard Classification</b>	<b>HAZARDOUS SUBSTANCE. DANGEROUS GOODS.</b>
<b>Risk phrase(s)</b>	R11 - Highly flammable. Irritating to eyes. R - 36 Irritating to the eyes R66 - Repeated exposure to skin may cause skin dryness and cracking. R67 - Vapours may cause drowsiness and dizziness.
<b>Safety phrase(s)</b>	S9 - Keep container in a well ventilated place. S16 - Keep away from sources of ignition. No smoking. S23 - Do not breathe gas/fumes/vapour/spray. S26 - In case of contact with eyes, rinse with plenty of water and seek medical advice. S46 - If swallowed, seek medical advices immediately and show this container or label.

**3. Composition/Information on Ingredients**

<b>Chemical Entity</b>	<b>CAS No:</b>	<b>Proportion</b>
Acetone	67-64-1	100%

**4. First Aid Measures**

<b>Inhalation:</b>	Remove victim from exposure and allow to breathe fresh air. If breathing laboured and patient cyanotic (blue), ensure airways are clear and give oxygen through a facemask. If breathing has stopped, apply artificial respiration. In the event of a cardiac arrest, apply cardiopulmonary resuscitation (CPR). Seek immediate medical attention.
<b>Ingestion:</b>	Aspiration hazard. Rinse mouth thoroughly with water, then give water to drink. If swallowed, DO NOT induce vomiting. Contact a doctor or Poisons Information Centre (Australia 13 11 26).
<b>Skin:</b>	Remove contaminated clothing and wash skin with copious quantities of water. If swelling, redness or blistering occurs, seek medical advice. Wash clothing before re-use. Seek medical attention if redness or irritation persist.
<b>Eye:</b>	Act promptly. Hold eyes open and flush with running water for at least 15 minutes. Seek medical attention.
<b>Advice to Doctor:</b>	Treat symptomatically.

**5. Fire Fighting Measures**

<b>Extinguishing Media</b>	Highly flammable. Alcohol foam, dry chemical, carbon dioxide. Use water spray to keep containers cool; dilute spills to non-flammable mixtures.
<b>Hazards from Combustion products</b>	On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include carbon dioxide (CO <sub>2</sub> ), other pyrolysis products typical of burning organic material
<b>Explosion:</b> l <sub>el</sub> : lower explosive limit u <sub>el</sub> : upper explosive limit	Above flash point (-20°C), vapour-air mixtures are explosive within flammable limits (l <sub>el</sub> : 2.6; u <sub>el</sub> : 12.8). Contact with strong oxidisers may cause fire. May produce floating hazard. Sensitive to static discharge.
<b>Precautions &amp; Equipment for Fire Fighters</b>	Autoignition temp: 465°C. Evacuate area immediately. Remove containers from path of fire. Keep containers cool with water spray. Flashback along vapour trail may occur. Firefighters should wear self-contained breathing apparatus as exposure to vapour or combustion products is likely.
<b>Hazchem Code</b>	2[Y]E

**6. Accidental Release Measure**

Eliminate all possible sources of ignition. Ventilate area well. Wear protective equipment to prevent skin contact and inhalation of vapour. Contain spills using sand or earth and use an inert absorbent (sand, vermiculite) where appropriate. Use spark free shovel. Collect and seal in properly labelled containers for disposal. Prevent run-off from entering drains and waterways.  
 Cleanup personnel must wear appropriate equipment to prevent inhalation, skin and eye contact. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive.  
 For large spills notify Emergency Services. Clear area of personnel and move upwind. If contamination of drains or waterways occurs, advise emergency services  
 Refer to local Waste Management Authority Regulations for approved disposal methods.

**7. Handling and Storage**

<b>Safe Handling Practices</b>	Avoid skin (use neoprene gloves, protective clothing) and eye contact and avoid breathing vapour (Use an Organic Vapour full face-piece with replaceable canister complying with AS/NZS 1715 and AS/NZS 1716). If splashing or spillage is likely to occur during handling, wear chemical or safety glasses with side shield protection.
<b>Storage</b>	This material is a SCHEDULED (S5) POISON and must be stored, handled and maintained according the appropriate Commonwealth Regulations. UN Number 1090. Classified as 3 (FLAMMABLE LIQUID). Dangerous substance for the purpose of transport. Refer to appropriate State Regulations for storage and transport requirements. Store in a cool, well-ventilated place, away from sources of heat or ignition. Store away from oxidising agents, strong bases or strong acids. Keep containers securely sealed.
<b>Other Information</b>	Reacts violently with bromoform and chloroform in the presence of alkalis or in contact with alkaline surfaces. Decomposes violently in contact with nitric / sulfuric acid mixtures. Can react violently with oxidising agents.

**8. Exposure Controls; Personal Protection**

<b>Exposure Limits:</b>	TLV/TWA: 500ppm, 1185mg/m <sup>3</sup>	Inhalation Limits: 1000ppm for 30 minutes
	STEL: 2375mg/m <sup>3</sup>	IDLH Value: 20000ppm
	TWA	Time-weighted average airborne concentration per 8 hour working day per 5 day working week over an entire working life.
	STEL	Short-term exposure limit - average airborne concentration per 15-minute period.
	IDLH	The dose immediately dangerous to life and health.
<b>Engineering Controls</b>	Maintain concentration below recommended exposure limit (500-1000ppm). Use with adequate ventilation at all times (use local exhaust equipment). Use	

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a non-sparking, grounded ventilation system.

### Personal Protection

Avoid skin (use neoprene gloves, protective clothing) and eye contact and avoid breathing vapour (Use an Organic Vapour full face-piece with replaceable canister complying with AS/NZS 1715 and AS/NZS 1716). If splashing or spillage is likely to occur during handling, wear chemical or safety glasses with side shield protection. When handling, DO NOT eat, drink or smoke. Always wash hands with soap and water after handling

## 9. Physical and Chemical Properties

<b>Appearance/ Odour:</b>	Colourless, mobile liquid with characteristic, sweet odour.		
<b>Boiling Point:</b>	56.2°C	<b>Solubility in Organic Solvents:</b>	Miscible with alcohol, ether, chloroform and most oils.
<b>Melting Point:</b>	-94.3°C	<b>Percent Volatiles:</b>	100%
<b>Vapour Pressure:</b>	24 kPa 20°C	<b>Flammability Limits:</b>	2.6 – 12.8%
<b>Vapour Density:</b>	2	<b>Autoignition Temperature:</b>	465°C
<b>Specific Gravity:</b>	0.79 at 20°C	<b>Relative Vapour Density:</b>	2.0 (Air=1)
<b>Flashpoint:</b>	-18°C closed cup	<b>Molecular Weight:</b>	58.08
<b>Solubility in Water:</b>	Readily soluble	<b>pH:</b>	2-6 (395 g/L, H <sub>2</sub> O, 20°C)

## 10. Chemical Stability and Reactivity Information

<b>Conditions Contributing to Instability:</b>	Considered stable under normal conditions of use. Avoid heating, naked flame, static discharge.
<b>Materials to Avoid:</b>	Oxidising agents, reducing agents, acids, alkalis.
<b>Hazardous Polymerisation:</b>	Will not occur

## 11. Toxicological Information

<b>Inhalation:</b>	Vapour will irritate mucous membranes and respiratory tract. Inhalation may cause headaches, dizziness and possible nausea. Narcotic in high concentrations. May affect central Nervous System (CNS) causing dizziness, drowsiness, confusion.
<b>Ingestion:</b>	Moderately toxic by ingestion. May cause gastric irritation (nausea, vomiting).
<b>Skin:</b>	Causes irritation if in contact with the skin. Repeated or prolonged skin contact may cause dermatitis. Degreasing to the skin.
<b>Eye:</b>	Irritating to eyes. Risk of corneal injury.
<b>Chronic:</b>	Repeated or prolonged contact can cause skin dryness, cracking and chronic dermatitis. May be toxic to the liver, kidneys, the reproductive system (suspected) and skin.
<b>Other:</b>	ORAL LD50 acute (rat): 5800mg/kg; (mouse) 3000mg/kg;(rabbit) 5340mg/kg VAPOUR LC50 acute: (rat) 50100mg/m 8 hours; (mouse) 4400mg/m 4 hours

## 12. Ecological Information

<b>Mobility:</b>	Acetone is expected to have high mobility in soils based on an estimated $K_{oc}$ value of 1. Volatilization from dry soil surfaces is expected based on the vapour pressure of Acetone.
<b>Persistence and Degradability:</b>	This product is biodegradable. 91%/28days
<b>Bioaccumulation:</b>	Bioaccumulation is not expected.
<b>Ecotoxicity:</b>	Ecotoxicity: May be harmful to aquatic life. Fish toxicity: <i>L. macrochirus</i> LC50: 8300mg/l/96h Daphnia toxicity: <i>Daphnia magna</i> EC50: 12600-12700mg/l/48h Algal toxicity: <i>Sc. Quadricauda</i> IC5: 750mg/l/8d Bacterial toxicity: <i>M. aeruginosa</i> EC5: 530mg/l/8d Protozoa toxicity: <i>E. sulcatum</i> EC5: 28mg/l/72h

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### 13. Disposal Considerations

**Disposal Methods & Containers:** Rinse out containers with water before disposing. Containers may be recycled where permitted.

**Special Disposal for Landfill or Incineration:** Refer to local Waste Management Authority Regulations for approved disposal methods.

### 14. Transport Information

**UN Number:** 1090

**UN Proper Shipping Name:** Acetone

**DG Class & Subsidiary Risk:** 3

**Packing Group:** II

**Hazchem Code:** 2[Y]E

### 15. Regulatory Information

Classified as schedule 5 using the criteria in the Standard Uniform Schedule for Drugs and Poisons.

### 16. Other Information

**References:**

1. *Acetone MSDS11/01/2011* ScienceLab.com
2. *Acetone MSDS AC0308 2001/58/CE 26/03/2008* ChemSupply
3. *HSIS database* Worksafe Australia

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<b>Revision Information</b>			
Date	Document Name	Superseded Document	Revision Information
August 2005	ACE00827F_05 August 2005	ACE00827F_4 September 2001	Change in address, format
August 2008	ACE00827F_06 August 2008	ACE00827F_05 August 2005	General review; product deletion
September 2011	ACE00827F_07 September 2011	ACE00827F_06 August 2008	General review

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