LIVINGSTONE INTERNATIONAL PTY LTD

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SAFETY DATA SHEET

Product Code: AA00825L-AR

SECTION 1 PRODUCT IDENTIFICATION

GHS Product: ACETONE

Recommended use of the chemical and restrictions on use: Solvent used in the processing of resin, lacquer, varnish, wax, adhesive, ink, paint and plastic, chemicals (methyl isobutyl ketone, methyl isobutyl carbinol, methyl methacrylate, bisphenol-A), solvent for potassium iodide and permanganate, delusterant for cellulose acetate fibres, photography, specification testing of vulcanised rubber products, cleaning and drying of precision equipment, analytical reagent and laboratory reagent.

Other Names

Name	Product Code
ACETONE LR	AL008
ACETONE AR	AA008
ACETONE TG	AT008
Propanone, 2-Propanone, Dimethyl ketone, Ketone propane, Methyl ketone	

SECTION 2 HAZARD IDENTIFICATION

GHS classification of the substance/mixture:
Eye Damage/Irritation: Category 2A
Flammable Liquids: Category 2
Specific Target Organ Toxicity - Single Exposure Category 2

Signal Word (s): DANGER

Hazard Statement (s):
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

Pictogram (s): Flame, Exclamation mark,

Precautionary statement – Prevention:
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.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – 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.
P312 Call a POISON CENTER or doctor/physician 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 sand, dry chemical or alcohol-resistant foam for extinction.

Precautionary statement – Storage: P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement – Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Other Information: Exposure to acetone may enhance the liver toxicity of chlorinated solvents.

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SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Information on Composition Derived by the oxidation of cumene, dehydrogenation or oxidation of isopropyl alcohol with metallic catalyst, vapour phase oxidation of butane or a by-product of synthetic glycerol production.

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Acetone	67-64-1	98-100 %		

SECTION 4 FIRST AID MEASURES

Inhalation 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.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor at once.

SECTION 5 FIRE FIGHTING MEASURES

Hazards from Combustion Products May librate toxic fumes in fire includes oxides of carbon.

Specific Methods Caution: Use of water spray when fighting fire may be inefficient.
Small fire: Use foam, dry chemical, CO2 or water spray.
Large fire: Use foam, fog or water spray - Do not use water jets.
If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical HIGHLY FLAMMABLE: These products have a low flash point - Will be easily ignited by heat, sparks or flames at ambient temperatures. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Fire may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Many liquids are lighter than water.
Many vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Vapours from run-off may create an explosion hazard.

Hazchem Code •2YE

Precautions in connection with Fire SCBA and structural firefighter's uniform may provide limited protection. Fully-encapsulating, gas-tight suits should be worn for maximum protection.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spills & Disposal ELIMINATE all ignition sources (no smoking, flares, sparks or flame) within at least 50m - All equipment used in handling the product must be earthed.
Do not touch or walk through spilled material.
Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Vapour-suppressing foam may be used to control vapours.
Absorb spill with earth, sand or other non-combustible material - Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal. Water spray may be used to knock down or divert vapour clouds.

	SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Take precautionary measures against static discharge. Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.
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.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea. Avoid release to the environment.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling	Take precautionary measures against static discharges. All electrical equipment must be flameproofed. Avoid breathing vapour, spray or mists. Avoid prolonged or repeated contact with skin and eyes .
Conditions for safe storage, including any incompatabilities	Store in a cool place. Store in well ventilated area. Store away from sources of heat or ignition. Store away from oxidising agents and strong acids and bases. Keep containers securely sealed.
Storage Regulations	Refer Australian Standard AS 1940-2017 'The storage and handling of flammable and combustible liquids'.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Acetone	2375	1000	1185	500	

Other Exposure Information	These Workplace 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 workplace 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. A time weighted average (TWA) has been established for Acetone [67-64-1] (Safe Work Australia) of 1185 mg/m³, (500 ppm). The corresponding STEL level is 2375 mg/m³, (1000 ppm). The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. 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.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels. Recommendation: Combined particulate/gas respirator.
Eye Protection	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.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves -

	Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. Recommendation: Flame retardant protective clothing.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Form	Liquid
Appearance	Colourless liquid.
Odour	Characteristic, sweetish odour.
Melting Point	-94 - 95 °C
Boiling Point	56 - 56.5 °C
Solubility in Water	Miscible with water.
Solubility in Organic Solvents	Miscible with alcohol, ether, chloroform, DMF and most oils.
Specific Gravity	0.792 @ 20 °C
pH	5-6 (395 g/l, H2O, 20 °C)
Vapour Pressure	180 mmHg (20 °C)
Vapour Density (Air=1)	2.0
Viscosity	0.303 cP @ 25 °C
Volatile Component	100%
Flash Point	<-20 °C (CC)
Flammability	Flammable liquid.
Auto-Ignition Temperature	465 °C
Flammable Limits - Lower	2.9 %
Flammable Limits - Upper	12.8%
Molecular Weight	58.08
Other Information	Refractive index: 1.3591 @ 20 °C Dipole moment: 2.7 Debye @ 20 °C Dielectric constant: 20.7 @ 25 °C Saturation concentration: 533 g/m3 @ 20 °C Heat of evaporation: 521 kJ/kg @ 56 °C

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under normal use conditons. Hygroscopic Sensitive to moisture.
Conditions to Avoid	Exposure to air. Light, heat, incompatibles.
Incompatible Materials	Oxidising agents (ie. CrO3, peroxi compounds, nitric acid, nitrating acid), reducing agents, alkali hydroxides, halogens, chloroform, chlorine compounds halogenated hydrocarbons/alkali hydroxides, halogen-halogen compounds, halogen oxides, alkali metals, nitrosyl compounds, metals, ethanolamine, nitric/sulfuric acid mixtures, strong acids and bases and various plastics and rubber.
Hazardous Decomposition Products	May librate toxic fumes in fire includes oxides of carbon.
Possibility of hazardous reactions	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.
Hazardous Polymerization	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity - Oral	LD50 (rat): 5800 mg/kg.
Acute Toxicity - Dermal	LD50 (rabbit): 20000 mg/kg.
Ingestion	Swallowing small amounts is not likely to produce harmful effects. Digestion in large quantities may lead to gastrointestinal complaints, headaches, salivation, nausea, vomiting, dizziness, narcosis and coma.
Inhalation	Inhalation of vapours concentrations causes respiratory tract and mucosal membrane irritation, dryness of the mouth and throat, dizziness, headaches, drowsiness, salivation, depression, nausea, vomiting and in severe cases leading to a coma.
Skin	Contact with skin may result in irritation. Will have a degreasing action on the skin.
Eye	Risk of corneal clouding! Vapours are irritating to the eyes. Splashes may cause severe irritation, with stinging, tearing, redness and pain.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	No evidence of carcinogenic properties.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Aspiration Hazard	Not classified based on available information.
Chronic Effects	Repeated or prolonged skin contact can cause skin dryness, cracking and chronic dermatitis. Due to its low toxicity and high volatility, acetone is unlikdely to be absrobed through the skin in harmful amounts unless evaporation is prevented. May damage the liver and kidneys.
Mutagenicity	No evidence of mutagenic properties.

SECTION 12 ECOLOGICAL INFORMATION

Persistence and degradability	Readily biodegradable, Biodegradation: 91%/28d.
Environmental Fate	Behaviour in environmental compartments: Distribution: log p(o/w): -0.24 (experimental) No bioaccumulation is to be expected (log P(o/w < 1). Bioconcentration factor: 0.69. Further ecologic data - Degradability: BOD5: 1.85 g/g; COD: 2.07 g/g; TOD: 2.20 g/g.
Bioaccumulative Potential	Does not bioaccumulate.
Environmental Protection	Avoid contaminating waterways. Harmful to aquatic life.
Acute Toxicity - Fish	LC50 (L.macrochirus): 8300 mg/l/96h.
Acute Toxicity - Daphnia	EC50 (Daphnia magna): 12600-12700 mg/l/48h.
Acute Toxicity - Algae	Maximum permissible toxic concentration: IC5 (Sc.quadricauda): 7500 mg/l/8 d.
Acute Toxicity - Bacteria	Maximum permissible toxic concentration: EC5 (M.aeruginosa): 530 mg/l/8 d. EC5 (Ps.putida): 1700 mg/l/16 d. EC5 (E.Sulcatum): 28 mg/l/72 h.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

SECTION 14 TRANSPORT INFORMATION

Transport Information	Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following: Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane, Class 7.
U.N. Number	1090
UN proper shipping name	ACETONE
Transport hazard class(es)	3
Hazchem Code	•2YE
Packing Group	II
EPG Number	3A1
IERG Number	14

SECTION 15 REGULATORY INFORMATION

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S5

SECTION 16 OTHER INFORMATION

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Chemical Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.

Empirical Formula & Structural Formula

CH3COCH3

END OF SDS