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SAFETY DATA SHEET

Product Code: CSLC1003-G2-5L

SECTION 1: Product Identification

1.1 Product identifier

Product name	ACETONE
CAS-No.	67-64-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for analysis and production

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification according to WHS Regulations (Australia)

Flammable liquids (Category 2), H225
Eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), H336
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F	Highly flammable	R11
Xi	Irritant	R36
		R66
		R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Pictogram

Flame

Exclamation Mark

Signal word 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.

Precautionary statement(s)	
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 vapours.
P264	Wash hand thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contract lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physical if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use carbon dioxide, dry chemical or foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

2.3 Other hazards None

SECTION 3: Composition/Information on Ingredients

3.1 Substances

Synonyms 2-Propanone, Dimethyl ketone, β-Keto-propane, Pyroacetic ether

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
67-64-1	200-662-2	606-001-00-8	CH_3COCH_3	58.08 g/mol	>99

Hazardous ingredients according to WHS Regulations (Australia)

Component	Classification
Acetone	
CAS-No 67-64-1 EC-No 200-662-2 EC-Index-No 606-001-00-8	Flammable liquids (Category 2), H225 Eye irritation (Category 2), H319 Specific target organ toxicity - single exposure (Category 3), H336

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification
Acetone	
CAS-No 67-64-1 EC-No 200-662-2 EC-Index-No 606-001-00-8	F, Highly flammable, R11 Xi,Irritant, R36 R66 R67

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. Obtain medical attention. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11.

4.3 Indication of any immediate medical attention and special treatment needed

After swallowing: immediately make victim drink plenty of water. Subsequently administer: Activate charcoal 20-40 g in 10% slurry. Laxative: Sodium Sulfate 1 tablespoon/250 ml of water. No milk, No castor oil, No alcohol. Indications for the doctor: Gastric lavage.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical, foam or water spray. In the event of fire, cool tanks with water spray.

5.2 Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air. Flash back possible over considerable distance.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4 Hazchem Code

•2YE

5.5 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed at room temperature in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Exposure limit (Safe Work Australia)

TWA: 500 ppm (1185 mg/m^3)
STEL: 1000 ppm (2375 mg/m^3)

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection
Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.
Handle with gloves

- Full contact wears gloves from butyl rubber material.
- Splash contact wears gloves from natural rubber material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter AX (EN 371).

Environmental exposure controls
Prevent liquid entering sewers, basements and workpits

SECTION 9: Physical/Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Form	Liquid
: Color	Colorless
Odor	Characteristic
Odor Threshold	Not Available
pH	5 – 6 at 395g/l H_2O
Melting point/range	-95.4°C
Boiling point/range	56.2°C
Flash point	-20ºC (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	2.6 %(V)
upper	13 %(V)
Vapor Pressure	233 hPa at 20ºC
Relative vapor density	2.01
Density	0.790 g/ml at 20ºC
Water solubility	Soluble at 20ºC
Partition coefficient (n-octanol/water)	log Pow: 0.24
Auto-Ignition temperature	465ºC
Decomposition Temperature	Not Available
Viscosity	0.33 mPa.s at 20ºC
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and Reactivity

10.1 Reactivity
Light-sensitive; sensitive to air, solvent. Explosible with air in a vaporous/gaseous state.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with hydrogen peroxide, strong oxidizing agents, bromine trifluoride, difluorine dioxide, 2-methyl-1,3-butadiene (isoprene), nitromethane, nitrosyl chloride (catalyst), nitrosyl perchlorate, peroxo monosulphuric acid.

The substance can react dangerously with alkali hydroxide, bromine, fluorine, sodium, strong oxidizing agents, strong reducing agents, nitric acid, chromosulphuric acid, chromium trioxide, chromyl chloride, ethanolamine, potassium tert- butoxide, phosphorus oxychloride, sulfur dichloride.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Alkali hydroxides, halogen compounds, strong oxidizing agent, peroxi compounds, halogen oxide, alkali metals, nitrosyl compounds, metals, ethanolamine, activated charcoal, chromosulfuric acid, chromy chloride, fluorine, strong reducing agent.

Unsuitable working materials are various plastics, rubber.

10.6 Hazardous decomposition products

Carbon monoxides, Carbon dioxides (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD_{50} (oral, rat): 5800 mg/kg

LD_{50} (dermal, rabbit): 20000 mg/kg

LC_{50} (inhalation, rat): 76 mg/l/4 h

Acute oral toxicity

Symptoms: gastrointestinal complaints, headache, salivation, nausea, vomiting, dizziness, narcosis, coma.

Acute inhalation toxicity

Absorption: mucosal irritations, drowsiness. In high dose; headache, salivation, nausea, vomiting.

Skin corrosion/irritation

Absorption: Slight irritations danger of skin.

Serious eye damage/eye irritation

Irritations: Risk of corneal clouding

Respiratory or skin sensitization

Dermatitis and sensitization of susceptible persons.

Germ cell mutagenicity

Not Available

Carcinogenicity

No carcinogenic in animal experiments.

Reproductive toxicity

No impairment of reproductive performance in animal experiments.

Specific target organ toxicity (STOT) - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure
Not Available

Aspiration hazard
Not Available

Further information
After absorption: gastrointestinal complaints, headache, salivation, nausea, vomiting, dizziness, narcosis, coma, mucosal irritations, drowsiness.

SECTION 12: Ecological Information

12.1 Toxicity

Toxicity to fish	LC_{50} Rainbow trout: 5540 mg/l /96h
Toxicity to daphnia and other aquatic invertebrates	EC_{50} Daphnia magna: 6100 mg/l /48h
Toxicity to algae	IC_5 M.aeruginosa: 530 mg/l/8d
Toxicity to bacteria	EC_5 Ps. Putida: 1700 mg/l /16d

12.2 Persistence and degradability
Biodegradability 91%/28 d, Readily biodegradable, according to appropriate OECD test.

12.3 Bioaccumulative potential
Partition coefficient (n-octanol/water) log Pow: 0.24
No bioaccumulation is to be expected (log P o/w <1)

12.4 Mobility in soil
Not Available

12.5 Other adverse effects
Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Product
There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging
Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport Information

Land Transport (ADG Code)

UN Number	1090
UN proper shipping name	ACETONE
Transport hazard class(es)	3
Hazchem Code	•2YE
Packing group	II
Environmental hazards	No
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1090
UN proper shipping name	ACETONE
Transport hazard class(es)	3
Packing group	II
Marine pollutant	No
Special precautions for user	Yes
EmS	F-E S-D

Air transport (IATA)

UN Number	1090
UN proper shipping name	ACETONE
Transport hazard class(es)	3
Packing group	II
Environmental hazards	No
Special precautions for user	No

River transport (AND/ADNR)

(Not examined)

SECTION 15: Regulatory Information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule S5

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3

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.

Full text of R-phrases referred to under sections 2 and 3

F	Highly flammable
Xi	Irritant
R11	Highly flammable.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Recommended restrictions
Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

Reference
Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Labelling according to Code of Practice for the Lebelling of Workplace Hazardous Chemicals (Safe Work Australia).
Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.
Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

END OF SDS