Safety Data Sheet

Date of Issue: 22.10.2024 Date of Expiry: 22.10.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	**Acetone**
Product Code	H451-10
CAS No.	67-64-1

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification
Flammable liquids (Category 2)
Serious eye damage/eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3), Central nervous system

2.2 GHS Label elements, including precautionary statements
Pictogram

DANGER

Hazard statement(s)
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)
Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3 Other hazards
Repeated exposure may cause skin dryness or cracking.

3: Composition/information on ingredients

3.1 Substances
Formula	:	C3H6O
Molecular weight	:	58.08 g/mol
CAS-No.	:	67-64-1
EC-No.	:	200-662-2
Index-No.	:	606-001-00-8

Chemical Identity	CAS No.	Content in percent %
Acetone	67-64-1	99.00 - 100.00%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4: First aid measures

4.1 Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.

Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.
Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material.
Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures
Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class
Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Acetone	67-64-1	WES-TWA	500 ppm 1,185 mg/m3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring		
		WES-STEL	1,000 ppm 2,375 mg/m3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Exposure can also be estimated by biological monitoring		

Biological occupational exposure limits

Component	Cas No.	Parameters	Value	Biological Specimen	Basis
Acetone	67-64-1	Acetone	50 mg/l	Urine	New Zealand biological exposure Indices
		Remarks	End of shift		

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Form	:	Liquid
Color	:	Colorless
Odor	:	Sweet, mint-like
Odor threshold	:	No data available.
pH	:	5 - 6 (20 °C)
Melting point/freezing point	:	-94.8 - 94.6 °C
Initial boiling point and boiling range	:	56 °C (101.3 kPa)
Flash Point	:	-20 - -17 °C (Closed Cup)
Evaporation rate	:	No data available.
Flammability (solid, gas)	:	Class IB Flammable Liquid

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%)	:	12.8 %(V)
Flammability limit - lower (%)	:	2.13 - 2.6 %(V)
Explosive limit - upper (%)	:	No data available.
Explosive limit - lower (%)	:	No data available.
Vapor pressure	:	233 - 240 hPa (20 °C) 309 hPa (25 °C) 530 - 560 hPa (40 °C)
Vapor density	:	2
Density	:	0.79 g/ml (20 °C)
Relative density	:	0.80 (20 °C)
Solubility(ies)		
Solubility in water	:	Miscible
Solubility (other)	-	Alcohol: Miscible
	-	Benzene: Soluble
	-	Chloroform: Miscible
	-	Dimethylformamide: Miscible
	-	ether: Miscible
Partition coefficient (n-octanol/water)	:	-0.24
Auto-ignition temperature	:	465 °C
Decomposition temperature	:	No data available.
Viscosity	:	No data available.

Other information

Liquid conductivity	:	0.6 µS/cm (25 °C)
Minimum ignition energy	:	1.15 mJ
Molecular weight	:	58.08 g/mol ($(CH_3)_2CO$)

10: Stability and reactivity

10.1 Reactivity:
No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability:
Material is stable under normal conditions.

10.3 Possibility of hazardous reactions:
Hazardous polymerization does not occur.

10.4 Conditions to avoid:
Heat, sparks, flames. Contact with incompatible materials.

10.5 Incompatible Materials:
Strong acids. Strong oxidizing agents.

10.6 Hazardous Decomposition
Thermal decomposition may release oxides of carbon.

11: Toxicological information

Information on likely routes of exposure

Inhalation: May cause irritation to the respiratory system.
Skin Contact: Prolonged skin contact may cause temporary irritation.
Eye contact: Causes serious eye irritation.
Ingestion: May cause irritation of the gastrointestinal tract.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	Product	: LD 50 (Rat): 5,800 mg/kg
Dermal	Product	: LD 50 (Rabbit) 20,000 mg/kg
Inhalation	Product	: LC 50 (Rat, 4 h) 50.1 - 76 mg/l

Repeated dose toxicity
No data available.

Skin Corrosion/Irritation
Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Eye Irritation
Causes serious eye irritation.

Respiratory or Skin Sensitization
Not a skin nor a respiratory sensitizer.

Carcinogenicity
This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity
In vitro
No mutagenic components identified
In vivo
No mutagenic components identified

Reproductive toxicity
No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure
Narcotic effect.

Specific Target Organ Toxicity - Repeated Exposure
None known.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard
Product: May be harmful if swallowed and enters airways.

Other effects: None known.

12: Ecological information

Ecotoxicity:
Acute hazards to the aquatic environment:
Fish
Product: LC 50 (Fathead minnow (Pimephales promelas), 96 h): 5,490 - 7,030 mg/l Mortality
LC 50 (Bluegill (Lepomis macrochirus), 96 h): 8,300 mg/l Mortality

Aquatic Invertebrates
Product: LC 50 (Brine shrimp (Artemia salina), 24 h): 2,100 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 48 h): 12,100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish	:	No data available.
Aquatic Invertebrates	:	No data available.
Toxicity to Aquatic Plants	:	No data available.

Persistence and Degradability
Biodegradation
Product: Expected to be readily biodegradable.
BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: -0.24

Mobility in soil:
No data available.

Other adverse effects:
The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13: Disposal considerations

Disposal instructions:
Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging:
Since emptied containers retain product residue, follow label warnings even after container is emptied.

14: Transport Information Table

	ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods

				Regulations
14.1	**UN Number**	1090	1090	1090
14.2	**UN Proper Shipping name**	ACETONE	ACETONE	Acetone
14.3	**Transport Hazard Class**	3	3	3
14.4	**Packaging group**	II	II	II
14.5	**Environmental Hazards**	No	No	No
14.6	**Special precautions for user**	none		

Other regulations
Hazchem Code : •2YE

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Approval Code: HSR001070
HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006
Tracking Required: not required
Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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