



Safety Data Sheet

Date of Issue: 23.08.2021

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	Acetaldehyde
Product Code	1005
CAS No.	75-07-0

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Flammable Liquids (Category A), H224
Eye irritation (Category A), H319
Germ cell mutagenicity (Category B), H341
Carcinogenicity (Category A), H350
Acute toxicity (Category E), Respiratory system, H335
Aquatic toxicity (Acute or Chronic) (Category D), H402

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word **Danger**

Hazard statement(s)

H224 Extremely flammable liquid and vapor.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

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/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 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.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

May form explosive peroxides.
 Photosensitizer.
 Lachrymator.

3: Composition/information on ingredients

Synonyms : Ethanal
 Formula : C₂H₄O
 Molecular weight : 44.05 g/mol
 CAS-No. : 75-07-0
 EC-No. : 200-836-8
 Index-No. : 605-003-00-6

Hazardous ingredients

Component	Classification	Concentration
acetaldehyde	3.1 A; 6.4 A; 6.6 B; 6.7 A; 6.1 E; 9.1 D; H224, H319, H341, H350, H335, H402	<= 100 %

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. Consult a physician.

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

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

Water Foam Carbon dioxide (CO₂) 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

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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.

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. Take up carefully with liquid-absorbent material (e.g. Chemizorb®). 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

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability

Recommended storage temperature
2 - 8 °C

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
acetaldehyde	75-07-0	WES-	20 ppm	New Zealand. Workplace Exposure

		TWA		Standards for Atmospheric Contaminants
	Remarks	Carcinogen - suspected human carcinogen		
		WES- STEL	50 ppm	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Carcinogen - suspected human carcinogen		

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use.

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

9: Physical and chemical properties

a) Appearance	
Form	: liquid, clear
Color	: colorless
b) Odor	: pungent
c) Odor Threshold	: No data available
d) Ph	: 5 at 20 °C
e) Melting point/freezing point	: Melting point: -123.5 °C
f) Initial boiling point and boiling range	: 21 °C at 1,013 hPa
g) Flash point	: -38.89 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid,gas)	: No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit : 57 %(V)
Lower explosion limit	: 4 %(V)
k) Vapor pressure	: 1,202 hPa at 25 °C
l) Vapor density	:1.52 - (Air = 1.0)

m) Relative density	: No data available
n) Water solubility	: completely miscible
o) Partition coefficient n-octanol/water log Pow expected.	: 0.63 - Bioaccumulation is not expected.
p) Autoignition temperature	: 175 °C : at 1,013 hPa
q) Decomposition temperature	: No data available
r) Viscosity available	: Viscosity, kinematic: No data : Viscosity, dynamic: 0.24 mPa.s at 20 °C
s) Explosive properties	: No data available
t) Oxidizing properties	: No data available

9.2 Other safety information

Relative vapor density	: 1.52 - (Air = 1.0)
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10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .
Avoid exposure to air any longer than necessary so as to prevent peroxide formation.
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

rubber, various plastics

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe irritations

Remarks: (RTECS)

Lacrimal irritation due to vapours. conjunctivitis

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

RTECS: AB1925000

Blurred vision, Unconsciousness, Headache, Vomiting, Nausea, Pulmonary edema. Effects may be delayed., Convulsions, sneezing, Cough, Shortness of breath

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12: Ecological information

12.1 Toxicity

Toxicity to fish

static test LC50 - Pimephales promelas (fathead minnow) - 31 mg/l

- 96 h

Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea) - ca. 48.3 mg/l - 48 h

Remarks: (ECHA)

Toxicity to algae

static test ErC50 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h

(OECD Test Guideline 201)

static test EC10 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h
(OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability aerobic Biochemical oxygen demand - Exposure time 14 d
Result: 80 % - Readily biodegradable.
(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers or contact us there if you have further questions.

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	1089	1089	1089
14.2	UN Proper Shipping name	ACETALDEHYDE Passenger Aircraft: Not permitted for transport	ACETALDEHYDE	Acetaldehyde
14.3	Transport Hazard Class	3	3	3
14.4	Packaging group	I	I	I
14.5	Environmental Hazards	no	no	no
14.6	Special precautions for user	None		
14.7	Incompatible materials	rubber, various plastics		

Other regulations

Hazchem Code : •2YE

15: Regulatory information

National regulatory information

HSNO Approval Code: HSR001069

HSNO Group Standard Approval: not required

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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