

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 30.03.2019
Revised on : 01.04.2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name Acetaldehyde
Product Number PSI094
Brand PureSynth research chemicals
CAS No. 75-07-0

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

Identified uses : Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company PureSynth Research Chemicals Pvt. Ltd.
FB-121, High Street mall, Kapurbawdi junction, Thane (W)

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids, Category 1	H224: Extremely flammable liquid and vapour.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Carcinogenicity, Category 1B	H350: May cause cancer.
Specific target organ toxicity - single exposure, (Category 3), Respiratory system	H335: May cause respiratory irritation.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H224	Extremely flammable liquid and vapour.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects
H350	May cause cancer.

Precautionary statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

Response:

P305 + P351 + P338	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
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Supplemental Hazard Statements	none
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2.3 Other hazards:

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
acetaldehyde	C ₂ H ₄ O	75-07-0

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
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
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
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media	Water Foam Carbon dioxide (CO ₂) Dry powder
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Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

Advice for fire-fighters

Stay in danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air. Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

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

Environmental precautions

Do not let product enter drains.

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 carefully with liquid-absorbent material.

Reference to other sections

Dispose of properly. Clean up affected area
For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and wellventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Specific end use(s)

Storage class (TRGS 510): 3, Flammable liquids

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

SECTION 8: Exposure controls / Personal protection

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Appropriate engineering controls

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
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves Full contact Material: butyl-rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Splash contact Material: butyl-rubber Minimum layer thickness: 0.7 mm Break through time: 480 min
Body Protection	Flame retardant antistatic protective clothing.
Respiratory protection	required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type AX The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. .
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

Appearance	Form: liquid Colour: colorless
Odour	pungent
pH - Value	5 (20 °C)
Density	0.78 g/cm ³
Boiling Point	21 °C
Melting Point	-123.5 °C
Solubility in water	6.95 g/l at 25 °C
Flash point	-40 °C
Vapour pressure	1.202 hPa (25 °C)
Auto -ignition temperature	175 °C
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	log Pow: 0.63 Bioaccumulation is not expected.
Viscosity	Dynamic: 0.24 mPa.s (20 °C)
Explosive properties	Not classified as explosive.
Upper / lower flammability or explosive limits	Upper explosion limit: 57 %(V) Lower explosion limit: 4 %(V)
Oxidizing properties	No data available

Other safety information:

Self-ignition: 175 °C 1.013 hPa

SECTION 10: Stability and reactivity

Reactivity	Vapours may form explosive mixture with air.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Violent polymerisation may be caused by: Metals, metallic salts, metallic oxides, mineral acids Exothermic reaction with: alkali, hydroxides, Alcohols, Amines, Ammonia anhydrides Risk of explosion with: nitrogen oxides, hydrogen peroxide, mercury compounds Risk of ignition or formation of inflammable gases or vapours with: Hydrogen cyanide (hydrocyanic acid), Oxidizing agents
Condition to avoid	Warming
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	Oral: No data available Inhalation: No data available Dermal: No data available
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation
Serious eye damage/eye irritation	Eyes - Rabbit Result: Severe irritations Remarks: Lacrimal irritation due to vapours. conjunctivitis
Respiratory or skin sensitization	Maximisation Test - Guinea pig Result: negative
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
Carcinogenicity	Presumed to have carcinogenic potential for humans
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
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Blurred vision, Unconsciousness, Headache, Vomiting, Nausea, Pulmonary edema. Effects may be delayed., Convulsions, sneezing, Cough, Shortness of breath

SECTION 12: Ecological information

Toxicity

Toxicity to fish

LC50 (Pimephales promelas (fathead minnow)): 31 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): ca. 48.3 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test

Toxicity to algae

EC10 (Pseudokirchneriella subcapitata): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
ErC50 (Pseudokirchneriella subcapitata): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Persistence and degradability

Biodegradability

Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 80 %
Related to: Biochemical oxygen demand
Exposure time: 14 d
Method: OECD Test Guideline 301C

Bio accumulative potential

Partition coefficient: n-octanol/water: log Pow: 0.63

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other adverse effects

No data available

SECTION 13: Disposal considerations

Waste treatment methods Products

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.

Contaminated packaging

No data available

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1089	ACETALDEHYDE	3	I	No
IMDG	1089	ACETALDEHYDE	3	I	No
IATA	1089	Acetaldehyde	3	I	No

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:

Number on list 3

Number on list 40

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)

Not applicable

REACH - List of substances subject to authorisation (Annex XIV)

Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5a FLAMMABLE LIQUIDS

Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

The information in this SDS is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The user must be determined suitability of this information for his application.