

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-20

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

1.1 Product identifiers

Product name : Valeraldehyde
Product Number : V103717
Brand : aladdin
CAS-No. : 110-62-3

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

Acute toxicity, Inhalation (Category 4), H332

Eye irritation (Category 2), H319

Skin sensitization (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225	Highly Flammable liquid and vapor
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation

Precautionary statement(s)

P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - 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 hands [and ...] thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (see ... on this label).
P302+P352	IF ON SKIN: wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P317	Get emergency medical help.
P337+P317	If eye irritation persists: Get medical help.
P332+P317	If skin irritation occurs: Get medical help.

P319

Get medical help if you feel unwell.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Pentanal ; Valeraldehyde
Formula	: C ₅ H ₁₀ O
Molecular weight	: 86.13
CAS No.	: 110-62-3
EC-NO.	: 203-784-4

Component	Classification	Concentration
Valeraldehyde	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; Skin Sens. 1; STOT SE 3; H225, H332, H319, H317, H335	≥97%

SECTION 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.

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 (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

no data available

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. Risk of dust explosion. 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.

SECTION 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). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. heat

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sensitive;air sensitive , 2-8 °C, stored in argon.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Component	CAS No.	Value	Control parameters	Basis
Valeraldehyde	110-62-3	TWA	50 ppm	U.S.A. ACGIH threshold limit value (TLV)
		TWA	50 ppm175 mg/m3	U.S.A. NIOSH recommended exposure limits
		PEL	50 ppm175 mg/m3	California allowable exposure limits for chemical pollutants (art. 107, para. 8)

8.2 Exposure controls

Appropriate engineering controls

Replace contaminated clothing immediately Use skin protective lotion. Wash hands and face after using this 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

Skin protection

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

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 ABEK

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

9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: Colorless to light yellow
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	102-103°C
g) Flash point	12°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	0.809-0.815
n) Water solubility	Soluble in water at 20°C, 13.5g/L. Soluble in alcohol.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent polymerization may be caused by: Amines Ammonia alkaline substances polymerisation initiators acids bases
Risk of explosion with: Oxidizing agents

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

Mild steel

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and
gastrointestinal tract., Risk of aspiration upon vomiting., Pulmonary failure possible after
aspiration of vomit.

LD50 Oral - Rat - male and female - 6.490 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 14,3 mg/l

(OECD Test Guideline 403)

Symptoms: Cough, Shortness of breath, mucosal irritations, Inhalation may lead to the
formation of oedemas in the respiratory tract., Symptoms may be delayed., Possible
damages:, damage of respiratory tract

Inhalation: absorption

LD50 Dermal - Rabbit - male - 4.857 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit Result: slight irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit Result: irritating Remarks: (ECHA)

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429) Remarks: The value is given in analogy to the following substances: 2-Methylbutyraldehyde Maximization Test - Guinea pig Result: positive (OECD Test Guideline 406) Remarks: The value is given in analogy to the following substances: Propanal

Germ cell mutagenicity

Test Type: Ames test Test system: Salmonella typhimurium Result: negative Remarks: (Lit.) Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: i.p. Method: OECD Test Guideline 474 Result: negative

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

Additional Information

RTECS: YV3600000

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) -

12,4 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

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invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - 31,5 mg/l - 48h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 20mg/l - 72 h

Remarks: (ECHA)

Toxicity to bacteria static test EC20 - activated sludge - 600 mg/l - 30 h

(ISO 8192,B)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 64,1 % - Readily biodegradable. (OECD Test Guideline 301D)

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Dispose of the remaining and non recyclable solution to a licensed company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 2058

Packing group: II

Class: 3

Proper shipping name:

Reportable Quantity(RQ): no data
available

Poison Inhalation Hazard: no data
available

VALERALDEHYDE

Environmental Hazards: no

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IMDG

UN number: 2058

Packing group: II

EMS-No: no data available

Proper shipping name: VALERALDEHYDE

IATA

UN number: 2058

Packing group: II

Class: 3

Proper shipping name: VALERALDEHYDE

SECTION 15: Regulatory information

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

SECTION 16: Other information**Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

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SDS sections updated v1

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