

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-06-18  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Acetylacetone  
Product Number : A110367  
Brand : aladdin  
CAS-No. : 123-54-6

### 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 3), H226

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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H226	Flammable liquid and vapor
H302	Harmful if swallowed
H402	Harmful to aquatic life
H311+H331	Toxic in contact with skin or if inhaled.
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.
P270	Do not eat, drink or smoke when using this product.
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.
P311	Call a POISON CENTER or doctor/...
P330	Rinse mouth.
P301+P312	IF SWALLOWED: call a POISON CENTER/doctor/... IF you feel unwell.
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.
P370+P378	In case of fire: Use ... to extinguish.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P501	Dispose of contents/container to an approved waste disposal plant.

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: Diacetylmethane;2,4-Pentanedione;acac
Formula	: C5H8O2
Molecular weight	: 100.12
CAS No.	: 123-54-6
EC-NO.	: 204-634-0

Component	Classification	Concentration
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Component	Classification	Concentration
Acetylacetone	Flam. Liq. 3; Acute Tox. 4; Acute Tox. 3; H226, H302, H331, H311	Analytical Reagent,99%

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this material 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. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. 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

no data available

### 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

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. Vapors are heavier than air and may spread along floors. Risk of dust explosion. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

### 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.

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## 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.

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## 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.

### 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. Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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

### 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. Keep locked up or in an area accessible only to qualified or authorized persons. Light sensitive, Store away from light.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 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

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**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Body Protection**

Impervious clothing, 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 fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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 such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: colorless to pale yellow
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-23°C
f) Initial boiling point and boiling range	140.5°C
g) Flash point	no data available
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	no data available
n) Water solubility	no data available
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

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|---------------------------|-------------------|
| s) Explosive properties N | no data available |
| t) Oxidizing properties N | no data available |

## 9.2 Other safety information

no data available

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## 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 reactions possible with: Acids Bases Amines Aldehydes anhydrides Oxidizing agents Hydrogen fluoride  
Halogenated compounds Cyanides Isocyanates alkalines bases Risk of ignition or formation of inflammable gases  
or vapours with: hydrides nitrides Alkali metals

### 10.4 Conditions to avoid

Heating.

### 10.5 Incompatible materials

Mild steel, Zinc, Copper, Nickel, various alloys

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 570 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - 5,0305 mg/l

(OECD Test Guideline 403)

Symptoms: mucosal irritations, Cough

LD50 Dermal - Rabbit - female - 790 mg/kg

Remarks: (ECHA)

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Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit Result: slight irritation Remarks: (ECHA)

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects. Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: without metabolic activation Method: OECD Test Guideline 473 Result: positive Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: positive Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Test system: Salmonella typhimurium 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: inhalation (vapor) Method: US-EPA Result: negative Test Type: comet assay Species: Rat Cell type: Liver cells Application Route: Oral Result: negative Remarks: (ECHA)

Carcinogenicity

no data available

Reproductive toxicity

Ingestion of excessive amounts by pregnant animals resulted in maternal and fetal toxicity.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated dose toxicity - Rabbit - male and female - Dermal - 9 Days - NOAEL (No observed

adverse effect level) - 244 mg/kg - LOAEL (Lowest observed adverse effect level) - 975

mg/kg

Remarks: (ECHA)

RTECS: SA1925000

Inhalation may provoke the following symptoms:, Dizziness, Suffocation

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

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After absorption:

Systemic effects:

Dizziness

Headache

Shortness of breath

respiratory arrest

Unconsciousness

Damage to:

Liver

Kidney

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

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

104 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 25,9 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (green algae) -

83,22 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - 107,6 mg/l - 3 h



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(OECD Test Guideline 209)

**12.2 Persistence and degradability**

aerobic - Exposure time 28 d Result: 83 - 100 % - Readily biodegradable. (OECD Test Guideline 301C) Ratio BOD/ThBOD 5,6 % Remarks: (Lit.)

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 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.

**12.6 Other adverse effects**

Discharge into the environment must be avoided.

**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: 2310

Packing group: III

Class: 3 (6.1)

Proper shipping name: PENTANE-2,4-

Reportable Quantity(RQ): no data

Poison Inhalation Hazard: no data

DIONE

available

available

Environmental Hazards: no

IMDG

UN number: 2310

Packing group: III

EMS-No: no data available

Proper shipping name: PENTANE-2,4-DIONE

IATA

UN number: 2310

Packing group: III

Class: 3 (6.1)

Proper shipping name: PENTANE-2,4-DIONE

**SECTION 15: Regulatory information**Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

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

## SECTION 16: Other information

<b>Prepared By</b>	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com
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