

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

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2025-09-21  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Formaldehyde dimethyl acetal  
Product Number : F431409  
Brand : aladdin  
CAS-No. : 109-87-5

### 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

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  
H319 Causes serious eye irritation

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H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
<b>Precautionary statement(s)</b>	
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.
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.
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.
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	: Formal, Methylal, Dimethoxymethane, Formaldehyde dimethyl acetal
Formula	: C3H8O2
Molecular weight	: 76.10
CAS No.	: 109-87-5
EC-NO.	: 203-714-2

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Component	Classification	Concentration
Formaldehyde dimethyl acetal	Flammable liquid category 2; Skin corrosion / prickle Excitation category 2; for synthesis Severe eye damage / eye Irritant category 2A; Specific target organ Systemic toxicity (primary exposure) Category 3; H225, H315, H319, H335, H336	

## 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.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### 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

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.

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.

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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.

**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**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Change contaminated clothing. Wash hands 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. Handle and open container with care. Test for peroxide formation periodically and before distillation.

**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

formaldehyde	109-87-5	PC-TWA	3100 mg/m3	Occupational exposure limits for hazardous factors in the workplace - chemical hazardous factors
dimethyl acetal				

## 8.2 Exposure controls

### Appropriate engineering controls

Replace contaminated clothing. Wash hands 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

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

Flame retardant antistatic protective clothing.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type AXBEK (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

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 |
| b) Odour                                   | no data available             |
| c) Odour Threshold                         | no data available             |
| d) pH                                      | no data available             |
| e) Melting point/freezing point            | -105 °C (lit.)                |
| f) Initial boiling point and boiling range | 42°C                          |
| g) Flash point                             | -32 °C                        |

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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	0.861-0.866
n) Water solubility	Slightly soluble in water, miscible in most organic solvents such as ethanol and ether.
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

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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: Strong oxidizing agents strong alkalis Acid chlorides Strong bases Exothermic reaction with: acids Risk of explosion with: lithium aluminium hydride

### 10.4 Conditions to avoid

Heat, flames and sparks. Warming. Moisture.

### 10.5 Incompatible materials

various plastics

### 10.6 Hazardous decomposition products

Peroxides In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

LD50 Oral - Rat - male and female - 6.423 mg/kg (OECD Test Guideline 423) LC50 Inhalation - Mouse - male and female - 7 h - 57.000 mg/m<sup>3</sup> (OECD Test Guideline 403) LD50 Dermal - Rabbit - male and female - > 5.000 mg/kg (OECD Test Guideline 402)

**Skin corrosion/irritation**

Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit Result: Mild eye irritation (OECD Test Guideline 405)

**Respiratory or skin sensitisation**

Maximization Test - Guinea pig Result: Did not cause sensitization on laboratory animals. (OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: reverse mutation assay Test system: *S. typhimurium* Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**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 - Rat - male and female - inhalation (vapor) - 90 d - NOAEL (No observed adverse effect level) - 2.000 mg/kg RTECS: PA8750000 prolonged or repeated exposure can cause:, narcosis, Dermatitis, Blurred vision

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**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish semi-static test LC50 - *Danio rerio* (zebra fish) - > 1.000 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - *Daphnia magna* (Water flea) - > 1.200 mg/l - 48 h (OECD Test Guideline 202)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 20 - 25 d Result: - According to the results of tests of biodegradability this product is not readily biodegradable.

**12.3 Bioaccumulative potential**

no data available

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**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**

Laboratory chemicals, Manufacture of substances

**SECTION 14: Transport information****DOT (US)**

UN number: 1234

Packing group: II

Class: 3

Proper shipping name: METHYLAL

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no

**IMDG**

UN number: 1234

Packing group: II

EMS-No: no data available

Proper shipping name: METHYLAL

**IATA**

UN number: 1234

Packing group: II

Class: 3

Proper shipping name: METHYLAL

**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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**Revision Summary**

SDS sections updated v1

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