

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

SAFETY DATA SHEET

Version: v1

Revision Date: 2024-10-09

Print Date: 2024-10-09

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

1.1 Product identifiers

Product name : 4,4'-Oxybis(benzenesulfonyl hydrazide)
Product Number : O139284
Brand : aladdin
CAS-No. : 80-51-3

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)
Self-reactive substances and mixtures (Type D), H242
Acute toxicity, Oral (Category 4), H302
Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 2B), H320
Skin sensitization (Category 1), H317
Germ cell mutagenicity (Category 2), H341
Specific target organ toxicity - single exposure (Category 2), H371
Specific target organ toxicity - repeated exposure (Category 1), H372
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411

2.2 GHS Label elements, including precautionary statements

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Pictogram	
Signal word	Danger
Hazard statement(s)	
H242	Heating may cause a fire
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H341	Suspected of causing genetic defects
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H315+H320	Cause skin and eye irritation
Precautionary statement(s)	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.
P220	Keep away from clothing and other combustible materials.
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P391	Collect spillage.
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.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P420	Store separately.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P301+P312+P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Synonyms	: no data available
Formula	: C12H14N4O5S2
Molecular weight	: 358.39
CAS No.	: 80-51-3
EC-NO.	: no data available

Component	Classification	Concentration
4,4'-Oxybis(benzenesulfonyl hydrazide)	Self-reactive substances and mixtures Type D; Acute toxicity Category 4; Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2B; Skin sensitization Category 1; Germ cell mutagenicity Category 2; Specific target organ toxicity - single exposure Category 2; Specific target organ toxicity - repeated exposure Category 1; Short-term (acute) aquatic hazard Category 2; Longterm (chronic) aquatic hazard Category 2; H242, H302, H315, H320, H317, H341, H371, H372, H401, H411	≥93%

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. 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

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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NO_x) Sulfur oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

no data available

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature see product label.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Operate according to industrial hygiene and safety usage rules. Wash hands before rest and at the end of work.

Personal protective equipment

Eye/face protection

Masks and safety glasses, please use equipment that has been tested and approved by official standards such as NIOSH (USA) or EN 166 (EU) to protect the eyes.

Skin protection

Gloves must be checked before use. Please use the correct method to remove the gloves (do not touch the outer surface of the gloves) and avoid any skin contact with the product. After use, please handle contaminated gloves carefully in accordance with relevant laws, regulations, and effective laboratory procedures and procedures. Please clean and blow dry the protective gloves selected for your hands, which must comply with the specifications given in Regulation (EU) 2016/425 and the derived EN 374 standard.

Body Protection

Permeable clothing, flame-retardant and anti-static protective clothing, and the type of protective equipment must be selected based on the concentration and content of hazardous substances in the specific workplace.

Respiratory protection

If the hazard assessment shows the need to use a gas mask with air purification, please use a full face multifunctional gas mask (US) or ABEK type (EN 14387) gas mask cartridge as a backup for engineering control. If a gas mask is the only way to protect, use a full face air supply gas mask. Respirators and parts that have been tested and passed government standards such as NIOSH (US) or CEN (EU) are used.

Control of environmental exposure

If safety requires, prevent further leaks or spills. Do not allow the product to enter the sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--------------------|------------------------------------|
| a) Appearance | form: powder or solid color: white |
| b) Odour | no data available |
| c) Odour Threshold | no data available |

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
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
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

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 1,000 - 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l - dust/mist

(OECD Test Guideline 436)

Dermal: No data available

Skin corrosion/irritation

Remarks: Causes skin irritation. (ECHA)

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation. (ECHA)

Respiratory or skin sensitisation

May cause allergic skin reaction. (ECHA)

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 Method: OECD Test Guideline 471 Result: Positive

results were obtained in some in vitro tests. Test Type: Chromosome aberration test in vitro Test system: Chinese

hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: positive Test Type: unscheduled DNA synthesis assay Test system: Liver Metabolic activation: Metabolic

activation Method: OECD Test Guideline 482 Result: positive Test Type: Micronucleus test Species: Mouse Cell type:

Red blood cells (erythrocytes) 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

May cause damage to organs through prolonged or repeated exposure. - Kidney

Aspiration hazard

no data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 Days - NOAEL (No observed adverse effect level) - 10

mg/kg

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

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

semi-static test EC50 - Daphnia magna (Water flea) - 2.9 mg/l - 48h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 6.7 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 20 mg/l - 30 min

(OECD Test Guideline 209)

Toxicity to fish(Chronic toxicity)

flow-through test NOEC - Oryzias latipes - 0.09 mg/l - 45 d

(OECD Test Guideline 210)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)

semi-static test NOEC - Daphnia magna (Water flea) - 2.13 mg/l -21 d

(OECD Test Guideline 211)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 10.9 % - Not readily biodegradable. (OECD Test Guideline 301C)

12.3 Bioaccumulative potential

Bioaccumulation Cyprinodon sp. (minnow) - 42 Days at 25 °C - 0.1 mg/l(4,4'-oxydibenzenesulfonohydrazide)

Bioconcentration factor (BCF): 0.3

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

no data available

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3077

Packing group: III

Class: 9

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

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'- oxydibenzenesulfonohydrazide) Environmental Hazards: YES	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
IMDG		
UN number: 3077	Packing group: III	EMS-No: no data available
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'- oxydibenzenesulfonohydrazide)		
IATA		
UN number: 3077	Packing group: III	Class: 9
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'- oxydibenzenesulfonohydrazide)		

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
Creation Date	10-Sep-2020
Revision Date	09-Oct-2024
Print Date	09-Oct-2024
Revision Summary	SDS sections updated v1

Disclaimer

Copyright Aladdin Co. Ltd. License granted to make unlimited paper copies for internal use only. The above information 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. It does not represent any guarantee of the properties of the product. Aladdin Co. Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.