

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-12

Print Date: 2025-09-16

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

### 1.1 Product identifiers

Product name	: Ruthenium
Product Number	: R105896
Brand	: aladdin
CAS-No.	: 7440-18-8(powder)

### 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)

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H228

Flammable solid

H413

May cause long lasting harmful effects to aquatic life

Precautionary statement(s)

P210

Keep away from heat, hot surface, sparks, open flames and other ignition sources. -  
No smoking.

P240

Ground/bond container and receiving equipment.

**ALADDIN SCIENTIFIC CORPORATION**

14078 Meridian Parkway, Riverside, CA. 92518

P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378	In case of fire: Use ... to extinguish.
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	: Ru Black;Ruthenium(0) black;Ruthenium element
Formula	: Ru
Molecular weight	: 101.07
CAS No.	: 7440-18-8(powder)
EC-NO.	: 231-127-1

Component	Classification	Concentration
Ruthenium	no data available	≥99.9% metals basis

**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**

no data available

**In case of skin contact**

Rinse with soap and plenty of water. Consult a doctor.

**In case of eye contact**

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

**If swallowed**

Rinse your mouth with water and then drink a large amount of water If symptoms appear, seek medical treatment

**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

---

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

no data available

### 5.3 Advice for firefighters

no data available

### 5.4 Further information

Cool unopened containers with water spray.

---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

It is recommended that emergency responders wear air-carrying respirators, anti-static clothing, and rubber oil-resistant gloves. Do not touch or step over spillage. All equipment used during work should be grounded. Cut off sources of leaks as much as possible. Eliminate all ignition sources. The warning area is delineated according to the influence area of liquid flow, vapor or dust diffusion, and unrelated personnel are evacuated to the safe area from the crosswind and upwind directions.

### 6.2 Environmental precautions

Do not allow the product to enter the sewer.

### 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). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal see section 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No data available

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place.

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

### 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

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

no data available

##### 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

no data available

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) 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

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: powder color: light gray
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	2310°C
f) Initial boiling point and boiling range	3900°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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	12.45 g/mL
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

strong oxidant

### 10.6 Hazardous decomposition products

no data available

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

May cause eye irritation.

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

There are no components in this product at levels greater than or equal to 0.1% that have been identified by IARC as possible or definite human carcinogens.

**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**

no data available

---

## SECTION 12: Ecological information

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

No data available

### 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**

no data available

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

**Contaminated packaging**

Dispose of as unused product.

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

UN number: 3089

Packing group: II

Class: 4.1

Proper shipping name: METAL  
POWDER, FLAMMABLE, N.O.S.Reportable Quantity(RQ): no data  
available

Poison Inhalation Hazard: No

Environmental Hazards: No

**IMDG**

UN number: 3089

Packing group: II

EMS-No: No

Proper shipping name: METAL POWDER, FLAMMABLE, N.O.S.

**IATA**

UN number: 3089

Packing group: II

Class: 4.1

Proper shipping name: METAL POWDER, FLAMMABLE, N.O.S.

**SECTION 15: Regulatory information**

no data available

**SECTION 16: Other information****Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

**Creation Date**

10-Sep-2020

**Revision Date**

12-Sep-2025

**Print Date**

16-Sep-2025

**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.