

## SAFETY DATA SHEET

### Section 1: Identification

Product name: Germanium  
Product use: For laboratory research purposes.  
Supplier: Trace Sciences International  
40 Vogell Rd Suite 42  
Richmond Hill, ON L4B 3N6  
CANADA  
Telephone: +1 905-770-1100  
Fax: +1 905-770-1160  
Emergency Phone: CANUTEC +1-613-996-6666

### Section 2: Hazard(s) Identification

#### 2.1 GHS Classification

Not a hazardous substance or mixture.

#### 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

### Section 3: Composition/ Information on Ingredients

Formula : Ge  
Molecular Weight : 72.64 g/mol

Material	CAS-No.	EC-No.	Index-No.	Concentration
Germanium	7440-56-4	231-164-3	-	<=100%

### Section 4: First-Aid Measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move person out of dangerous area if safe to do so.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15 minutes. Use chemical shower if available. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contacts if possible.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## Section 5: Fire-Fighting Measures

### 5.1 Conditions of flammability

No data available

### 5.2 Suitable extinguishing media

Powder for metal fires

### 5.3 Hazardous combustion products

Hazardous decomposition products formed under fire conditions: Germanium Oxides

### 5.4 Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.5 Further information

No data available

## Section 6: Accidental Release Measures

### 6.1 Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

## Section 7: Handling and Storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### 7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

## Section 8: Exposure Controls/Personal Protection

### 8.1 Components with workplace control parameters

No data available

### 8.2 Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face 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).

#### Hand 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.

#### **Eye 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 and body protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

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

#### **Specific engineering controls**

Use mechanical exhaust or laboratory fume hood to avoid exposure.

### **Section 9: Physical and Chemical Properties**

#### **Appearance**

Form	Pieces
Colour	Grey, White

#### **Safety Data**

pH	No data available
Melting point/freezing point	937 °C (1,719 °F).
Boiling point	2,830 °C (5,126 °F)
Flash point	Not applicable
Flammability (solid, gas)	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	5.32 g/cm <sup>3</sup> at 20°C
Water solubility	0.0318 g/l - Insoluble
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	Odorless
Odour Threshold	No data available
Evaporation rate	No data available

### **Section 10: Stability and Reactivity**

#### **10.1 Chemical stability**

Stable under recommended storage conditions

#### **10.2 Possibility of hazardous reactions**

No data available

#### **10.3 Conditions to avoid**

No data available

#### 10.4 Materials to avoid

Strong oxidizing agents, halogens, water, sulfuric acid, molten alkali metals, nitrates, carbonates

#### 10.5 Hazardous decomposition products

See section 5

### Section 11: Toxicological Information

#### Acute toxicity

##### Oral

Acute toxicity estimate Oral - > 2,000 mg/kg  
(Calculation method)

LD50 Oral - Rat - female - > 2,000 mg/kg  
(OECD Test Guideline 425)

Remarks: The value is given in analogy to the following substances: germanium(IV) oxide

##### Inhalation

No data available

##### Dermal

No data available

##### Other information on acute toxicity

No data available

#### Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test  
Result: No skin irritation  
(OECD Test Guideline 439)

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitization

Maximization Test - Guinea pig  
Result: negative  
(OECD Test Guideline 406)

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

#### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

**Aspiration hazard**

No data available

**Signs and Symptoms of Exposure**

Liver injury may occur, kidney injury may occur, blood disorders, cough, difficulty in breathing, stomach irregularities

**Additional Information**

RTECS: LY5200000

**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 PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

**Section 13: Disposal Considerations**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**Section 14: Transport Information**

**IATA**

Not dangerous good

**Section 15: Regulatory Information**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

## Section 16: Other Information

### **Further information**

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for his or her particular purpose(s).

### ***Trace Sciences International.***

See <https://www.tracesciences.com/> for additional terms and conditions of sale.

**Date Prepared: February 10, 2025**