

SAFETY DATA SHEET

GERMANIUM (powder and pieces)

1. IDENTIFICATION

1.1 PRODUCT IDENTIFIERS

Product Name: Germanium (powder and pieces)
Synonyms, Trade Names: Ge

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE

Identified Uses: Optical material for manufacturing of Optical Components

1.3 DETAILS OF SUPPLIER OF THE SAFETY DATA SHEET

Company: American Photonics, Inc.
6621 19th Street East
Sarasota, FL 34243
(941) 752-5811

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Phone: (941) 752-5811
Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

2. HAZARDOUS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

No Hazardous Product as specified

2.2 LABEL ELEMENTS

H315 Causes skin irritation
H319 Causes serious eye irritation
H332 Harmful if Inhaled

Precautionary Statements:

P262 Do not breath dust / fumes / gas / mist / vapors / spray

2.3 OTHER HAZARDS

None

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	B
 	

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Component Name	CAS Number	Percentages are by weight
Germanium	7440-56-4	>99%

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL: Consult a doctor for specific advice
EYES: Irrigate thoroughly with water for at least 15 minutes. If discomfort persists, obtain medical attention



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SKIN: Wash thoroughly with soap and water

INHALATION Move exposed to fresh air. Obtain medical attention

INGESTION: Wash out mouth thoroughly with water. In severe cases obtain medical attention

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to Section 2.2 and to Section 11

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If seeking medical attention, provide SDS document to physician.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

This product is not flammable.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

None Known

5.3 ADVICE FOR FIREFIGHTERS

Use breathing apparatus if necessary



6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective clothing & equipment as listed under Section 8. Avoid making dust.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage. Do not let product enter drains. Do not discharge to the environment.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Reuse or recycle products wherever possible. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely.

Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

Dispose of contents / container in accordance with national regulations.

6.4 REFERENCE TO OTHER SECTIONS

Dispose as in Section 13. Personal protection see Section 8.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Minimize dust generation and accumulation. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Keep away from food, drink, and animal feeding.

Keep container tightly sealed when not in use.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

No specific recommendations.

7.3 SPECIFIC END USES

The identified uses for this product are detailed in Section 1.2

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

ACGIH TLV (United States 1/2009)

OCCUPATIONAL EXPOSURE LIMITS (OEL): 10mg/m³ Inhalable; Particulates (Insoluble) (PNOS)

8 hour Time Weighted Average (TWA). 5mg/m³ Respirable; Particulates (Insoluble) (PNOS)

8 hour Time Weighted Average (TWA).

8.2 EXPOSURE CONTROLS

Protective gloves made of PVA are required. Use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation. Wash hands immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Grey-black geometric shapes.

ODOR: No Odor

BOILING POINT: 2830° C (5,126° F)

MELTING POINT: 937.4° C (1719.32° F)

AUTO/SELF-IGNITE TEMP Not applicable

FLASH POINT: Not applicable

FLAMMABILITY: Not applicable

RELATIVE DENSITY: 5.323 g/mL at 25° C (77° F)

SOLUBILITY IN WATER: Insoluble

pH-value: Not Determined

Explosive Properties: Not applicable

9.2 OTHER SAFETY INFORMATION

None

10. STABILITY AND REACTIVITY

10.1 REACTIVITY:

Reacts slowly with mineral acids. Alkaline H₂O₂ or aqueous NaClO rapidly causes oxidation.

10.2 CHEMICAL STABILITY

Stable under normal conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

None under normal conditions

10.4 CONDITIONS TO AVOID:

Avoid strong acids and oxidizing agents.

10.5 INCOMPATIBLE MATERIALS:

Strong acids. Strong bases. Oxidizing agents

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

Normally none.



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11. TOXICOLOGICAL INFORMATION

11.1 ACUTE TOXICITY:

ORAL:	LD50 >5000 mg/kg (oral / rat)
CHRONIC TOXICITY:	No additional information
CORROSION IRRITATION:	No additional information
SENSITIZATION:	No additional information
SINGLE TARGET ORGAN:	No additional information
NUMERICAL MEASURES:	No additional information
CARCINOGENICITY:	No evidence of carcinogenic properties
MUTAGENICITY:	No additional information
REPRODUCTIVE TOXICITY:	No additional information

12. ECOLOGICAL INFORMATION

12.1 TOXICITY:	No data
12.2 PERSISTENCE AND DEGRADABILITY	No data
12.3 BIOACCUMULATIVE POTENTIAL:	No data
12.4 MOBILITY IN SOIL:	No data
12.5 OTHER ADVERSE EFFECTS:	No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.

13. DISPOSAL CONSIDERATIONS

- 13.1 Chemical residues are generally classified as special waste and are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company.

14. TRANSPORT INFORMATION

14.1 UN NUMBER:	None
14.2 UN PROPER SHIPPING NAME:	Not subject to transport regulations
14.3 TRANSPORT HAZARD CLASS:	None
14.4 PACKING GROUP:	None
14.5 ENVIRONMENTAL HAZARDS:	None
14.6 SPECIAL PRECAUTIONS FOR USER:	None
14.7 TRANSPORT IN BULK:	No data

15. REGULATORY INFORMATION

15.1 UNITED STATES (US)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed or exempt.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed or exempt.



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RCRA (Hazardous waste code):

None

TSCA (Toxic Substances Control Act):

All ingredients are listed

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

None of the ingredients are listed.

15.2 PROPOSITION 65 (California)

Chemicals known to cause cancer:	None
Chemicals known to cause reproductive toxicity for females:	None
Chemicals known to cause reproductive toxicity for males:	None
Chemicals known to cause developmental toxicity:	None

16. OTHER INFORMATION

16.1 The above information is believed to be correct, but does not purport to be all inclusive and must be used only as a guide.

16.2 REVISION DATE: 03.23.2020