



LTS Research Laboratories, Inc.
Safety Data Sheet
Germanium Arsenic Telluride

1. Product and Company Identification

Trade Name: Germanium Arsenic Telluride
Chemical Formula: GeAsTe
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H228: Flammable solid
H301+H311: Toxic if swallowed or in contact with skin
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H319: Causes serious eye irritation
H332: Harmful if inhaled
H335: May cause respiratory irritation
H360: May damage fertility or the unborn child
H410: Very toxic to aquatic life with long lasting effects.
H413: May cause long lasting harmful effects to aquatic life

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/light/ equipment
P261: Avoid breathing dust/fume/gas/mist/vapors/spray
P271: Use only outdoors or in a well-ventilated area
P272: Contaminated work clothing must not be allowed out of the workplace
P273: Avoid release to the environment
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352: IF ON SKIN: Wash with plenty of soap and water

P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P308 + P313: IF exposed or concerned: Get medical advice/ attention

P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention

P363: Wash contaminated clothing before reuse

P370+P378: In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction

P403+P233 Store in a well-ventilated place. Keep container tightly closed

P405: Store locked up

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):	Powder	Pieces
Health:	3	2
Flammability:	1	0
Physical:	3	1

3. Composition

Chemical Family: Alloy
Additional Names: Germanium Arsenic Tellurium Alloy

Tellurium (Te):
Percentage: 0-100 wt%
CAS #: 13494-80-9
EC #: 236-813-4

Germanium (Ge):
Percentage: 0-100 wt%
CAS #: 7440-56-4
EC #: 231-164-3

Arsenic (As):
Percentage: 0-100 wt%
CAS #: 7440-38-2
EC #: 231-148-6



4. First Aid Procedures

General Treatment:	Remove any contaminated clothing Remove breathing apparatus only after contaminated clothing has been completely removed Supply oxygen if breathing is difficult Seek medical attention if symptoms persist
Special Treatment:	Immediately remove any clothing soiled by the product. In case of irregular breathing or respiratory arrest provide artificial respiration.
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Do NOT induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

5. Firefighting Measures

Flammability:	Non-flammable, except as powder
Extinguishing Media: Spec. Fire Fighting Procedure:	Do not use water for metal fires – use CO ₂ , sand, extinguishing powder. Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. Remove all ignition sources. Evacuate personnel away from dangerous areas.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	0.5* 0.01** mg/m ³ as As, long-term value *organic **inorganic 0.1 mg/m ³ as Te, long-term value
Threshold Limit Value:	0.01 mg/m ³ as As, long-term value 0.1 mg/m ³ as Te, long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick.
Penetration time of glove material:	480 minutes
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Halogens, Acids, Bases, Interhalogens, Oxidizing agents, Zinc, Cadmium, Sodium/sodium oxides, Potassium
Incompatible Conditions:	Heat, flames, sparks and direct sunlight, Air, Avoid dust formation
Hazardous Decomposition Products:	Toxic metal oxide fume , Germanium Oxide, Arsenic oxides, Hydrogen telluride

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	May cause irritation
Ingestion:	Toxic if swalled
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	Confirmed carcinogen (as Arsenic) EPA-AL, IARC-1, ACGIH A1, NTP-K

12. Ecological Information

Aquatic Toxicity:	High
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	Very toxic to aquatic life Keep away from any water sources May cause long lasting harmful effects to aquatic life.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

14. Transportation Data

Hazardous:	Hazardous (Powder)
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Hazard Class:	4.1 Flammable Solid
Packing Group:	II
UN Number:	UN 3089
Proper Shipping Name:	Metal powder, flammable, n.o.s. (Germanium Arsenic Telluride)

Hazardous as Pieces



Hazard Class:	6.1 Toxic substances
Packing Group:	II
UN Number:	UN 1557
Proper Shipping Name:	Arsenic compound, solid, n.o.s. (Germanium Arsenic Telluride)

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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