

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Product Name | Tellurium Metal Powder, Enriched Tellurium |
| Chemical Formula | Te |
| Molecular Weight | 127.60 g/mol |
| CAS No. | 13494-80-9 |
| EINECS/ELINCS No. | 236-813-4 |
| Supplier Address* | ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States |
| Telephone | +1 415-440-4433 |
| Fax | +1 415-563-4433 |
| Emergency Phone Number (both supplier and manufacturer) | Infotrac/ +1 800-535-5053 *May include subsidiaries or affiliate companies/divisions |
| Email | iusa@isoflex.com |
| Website | www.isoflex.com |
| Preparation Information | ISOFLEX USA Product Safety +1 415-440-4433 |

2. HAZARDS IDENTIFICATION

Emergency Overview:

Flammable (USA)
Highly flammable (EU)
Highly toxic (USA)
Very toxic (EU)
Very toxic if swallowed or in contact with skin

Target Organs:

Central nervous system
Keep away from sources of ignition – NO SMOKING
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
Take off immediately all contaminated clothing
Wear suitable protective clothing, gloves and eye/face protection

Classification of the Substance or Mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Inhalation (Category 4), H332
Skin sensitization (Sub-category 1B), H317
Reproductive toxicity (Category 1B), H360
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements



Pictogram

Signal word Danger

Hazard statement(s)

H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H360 May damage fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.
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.
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 or doctor/ physician if you feel unwell.
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.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

NFPA Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Reactivity = 0



HMIS Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Physical Hazard = 0

| | |
|------------------------|----------|
| HEALTH HAZARD | 2 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 0 |

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Name Tellurium Metal Powder, Enriched Tellurium
Chemical Formula Te
Molecular Weight 127.60 g/mol
CAS No. 13494-80-9

4. FIRST AID MEASURES

| | |
|-------------------------------|---|
| <i>Ingestion</i> | If swallowed, wash out mouth with water, provided person is conscious. Call a physician. Never give anything by mouth to an unconscious person. |
| <i>Inhalation</i> | Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. |
| <i>Dermal Exposure</i> | In case of contact, immediately wash skin with soap and copious amounts of water. |
| <i>Eye Exposure</i> | Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water. Assure adequate flushing of the eyes by separating the eyelids with fingers. |
| <i>Additional Information</i> | Symptoms and effects, both acute and delayed, include nausea, headache, vomiting, and central nervous system depression. |

5. FIREFIGHTING MEASURES

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| <i>Suitable Extinguishing Media</i> | Use water spray, alcohol resistant foam, dry chemical powder or carbon dioxide. |
| <i>Special Firefighting Procedures</i> | Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. |
| <i>Special Hazards Arising from the Substance</i> | Tellurium oxides |
| <i>Unusual Fire and Explosions Hazards</i> | This material, like most materials in powder form, is capable of creating a dust explosion. Emits toxic fumes under fire conditions. |

6. ACCIDENTAL RELEASE MEASURES

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|----------------------------------|---|
| <i>Personal Precautions</i> | Evacuate area. Shut off all sources of ignition. Use non-sparking tools. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. |
| <i>Environmental Precautions</i> | Do not let product enter drains. |
| <i>Methods for Cleaning Up</i> | Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. |

7. HANDLING AND STORAGE

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|-----------------|--|
| <i>Handling</i> | Avoid contact with skin and eyes. Avoid formation of dusts and aerosols. |
| <i>Storage</i> | Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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|-----------------------------|---|
| <i>Engineering Measures</i> | Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. |
|-----------------------------|---|

Exposure Guidelines

| | | |
|------------|----------------|-----------------------|
| ACGIH TLV | TWA: | 0.1 mg/m ³ |
| OSHA PEL | (Vacated) TWA: | 0.1 mg/m ³ |
| | TWA: | 0.1 mg/m ³ |
| NIOSH IDLH | IDLH: | 25 mg/m ³ |
| | TWA: | 0.1 mg/m ³ |
| Quebec | TWA: | 0.1 mg/m ³ |

| | | |
|------------------|------|-----------------------|
| Mexico OEL (TWA) | TWA: | 0.1 mg/m ³ |
| Ontario TWAEV | TWA: | 0.1 mg/m ³ |

Personal Protective Equipment

| | |
|-------------------------|--|
| <i>Respirators</i> | Wear appropriate NIOSH/MSHA-approved respirator. Use only in a chemical fume hood. Do not breathe dust. |
| <i>Hand</i> | Wear chemical-resistant gloves. |
| <i>Eye</i> | Wear safety goggles, face shield and other protective clothing. Safety shower and eye bath. Do not get in eyes or on skin or clothing. |
| <i>Hygiene Measures</i> | Wash thoroughly after handling. Remove and wash contaminated clothing promptly. |
| <i>General</i> | Avoid prolonged or repeated exposure. Keep tightly closed. Keep away from heat, sparks, and open flame. Avoid contact with acid. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| | |
|----------------|----------|
| Physical State | Powder |
| Color | Silver |
| Odor | Odorless |

Safety Data

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|--------------------------------|--------------------|
| Boiling Point | 990 °C |
| Melting Point | 450 °C |
| Relative Density | 6.24 g/mL at 25 °C |
| Vapor Pressure | 1mm Hg @ 520 °C |
| Vapor Density | No data available |
| % Volatiles | No data available |
| Solubility in H ₂ O | Insoluble |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| <i>Incompatible Materials</i> | Zinc, cadmium, sodium, potassium, strong acids, strong bases, halogens |
| <i>Hazardous Combustion or Decomposition Products</i> | Nature of decomposition products not known |

11. TOXICOLOGICAL INFORMATION

| | |
|------------------------------|---|
| <i>Acute Toxicity</i> | LD50 Oral - Rat - 83 mg/kg May be fatal if swallowed or absorbed through skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. |
| Carcinogenicity | |
| <i>IARC</i> | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen. |
| <i>Reproductive Toxicity</i> | Reproductive toxicity - Rat - Intramuscular |
| <i>Effects on Fertility</i> | Post-implantation mortality (dead or resorbed implants per total number of implants). Specific Developmental Abnormalities: Central nervous system. |

| | |
|---|--|
| <i>Effects on Embryo or Fetus</i> | Fetotoxicity (except death). Specific Developmental Abnormalities: Musculoskeletal system. Effect on Newborn: Other neonatal measure or effects. |
| | Developmental Toxicity - Rat - Oral |
| | Specific Developmental Abnormalities: Central nervous system. |
| <i>Specific Developmental Abnormalities</i> | Craniofacial (including nose and tongue). Musculoskeletal system. |
| <i>Other</i> | Exposure can cause nausea, headache and vomiting, central nervous system depression. |

12. ECOLOGICAL INFORMATION

| | |
|--------------------------------------|---|
| <i>Toxicity</i> | Do not empty into drains. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment. |
| <i>Persistence and Degradability</i> | Insoluble in water |
| <i>Bioaccumulation/Accumulation</i> | No information available |
| <i>Mobility</i> | It is not likely mobile in the environment due to its low water solubility. |

13. DISPOSAL CONSIDERATIONS

| | |
|----------------|---|
| <i>Product</i> | Material in the elemental state should be recovered for reuse or recycling. Contact licensed professional waste disposal service to dispose of this material. Dissolve the material by mixing with a combustible solvent; burn in a chemical incinerator equipped with an afterburner and scrubber. |
| | Observe all federal, state and local environmental regulations. |

14. TRANSPORT INFORMATION

DOT (US)

| | |
|---------------------------|--|
| Proper Shipping Name: | Toxic solid, inorganic, n.o.s. (Tellurium) |
| UN No.: | 3288 |
| Class: | 6.1 |
| Packing Group: | III |
| Poison Inhalation Hazard: | No |

IMDG

| | |
|-----------------------|--|
| Proper Shipping Name: | TOXIC SOLID, INORGANIC, N.O.S. (Tellurium) |
| UN No.: | 3288 |
| Class: | 6.1 |
| Packing Group: | III |
| EMS No: | F-A, S-A |
| Marine Pollutant: | No |

IATA

| | |
|-----------------------|---|
| Proper Shipping Name: | Toxic solid, inorganic n.o.s. (Tellurium) |
| UN No.: | 3288 |
| Class: | 6.1 |
| Packing Group: | III |

15. REGULATORY INFORMATION

U.S. Federal Regulations

| | |
|---|---|
| TSCA 12(b) | Not applicable |
| SARA 302 | No components are subject to the reporting requirements of SARA Title III, Section 302. |
| SARA 313 | This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313. |
| SARA 311/312 Hazards | Acute Health Hazard, Chronic Health Hazard |
| Clean Water Act | Not applicable |
| Clean Air Act | Not applicable |
| OSHA | Not applicable |
| CERCLA | Not applicable |
| WHMIS Hazard Class | D1A: Very toxic material |
| Massachusetts Right to Know Components | No components are subject to the Massachusetts Right to Know Act. |
| New Jersey Right to Know Components | No components are subject to the New Jersey Right to Know Act. |
| Pennsylvania Right to Know Components | No components are subject to the Pennsylvania Right to Know Act. |
| Rhode Island Right to Know Components | No components are subject to the Rhode Island Right to Know Act. |
| California Prop. 65 Components | This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm. |

16. OTHER INFORMATION

| | |
|-----------------|---|
| Prepared By | ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States |
| Issuing Date | September 15, 2014 |
| Revision Date | October 19, 2024 |
| Revision Number | 4 |
| Revision Note | Update supplier address |

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

| | |
|--------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| ADR | European Agreement Concerning the International Carriage of Dangerous Goods by Road |
| ALARA | As Low As Is Reasonably Achievable |
| AMU | Atomic Mass Unit |
| ANSI | American National Standards Institute |
| BLS | Basic Life Support |
| CAM | Continuous Air Monitor |
| CAS | Chemical Abstracts Service (division of the American Chemical Society) |
| CEN | European Committee for Standardization |
| CERCLA | Comprehensive Environmental Response Compensation and Liability Act |
| CLP | Classification, Labelling and Packaging (European Union) |
| CPR | Controlled Products Regulations (Canada) |
| CWA | Clean Water Act (USA) |
| DAC | Derived Air Concentration (USA) |
| DOE | United States Department of Energy (USA) |

| | |
|--------|---|
| DOT | United States Department of Transportation (USA) |
| DSL | Domestic Substances List (Canada) |
| EC50 | Half Maximal Effective Concentration |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EHS | Environmentally Hazardous Substance |
| ELINCS | European List of Notified Chemical Substances |
| EMS | Emergency Response Procedures for Ships Carrying Dangerous Goods |
| EPA | Environmental Protection Agency (USA) |
| EPCRA | Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 |
| GHS | Globally Harmonized System |
| HMIS | Hazardous Materials Identification System (USA) |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Containers |
| ICAO | International Civil Aviation Organization |
| IDLH | Immediately Dangerous to Life or Health |
| IMDG | International Maritime Code for Dangerous Goods |
| LC50 | Lethal concentration, 50 percent |
| LD50 | Lethal dose, 50 percent |
| LDLO | Lethal Dose Low |
| LOEC | Lowest-Observed-Effective Concentration |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| MSHA | Mine Safety and Health Administration (USA) |
| NCRP | National Council on Radiation Protection & Measurements (USA) |
| NDSL | Non-Domestic Substances List (Canada) |
| NFPA | National Fire Protection Association (USA) |
| NIOSH | National Institute for Occupational Safety and Health (USA) |
| NOEC | No Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| NRC | Nuclear Regulatory Commission (USA) |
| NTP | National Toxicology Program (USA) |
| OSHA | Occupational Safety and Health Administration (USA) |
| PBT | Persistent Bioaccumulative and Toxic Chemical |
| PEL | Permissible Exposure Limit |
| PIH | Poisonous by Inhalation Hazard |
| RCRA | Resource Conservation and Recovery Act (USA) |
| RCT | Radiation Control Technician |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe) |
| RID | Regulations Concerning the International Transport of Dangerous Goods by Rail |
| RTECS | Registry of Toxic Effects of Chemical Substances |
| SARA | Superfund Amendments and Reauthorization Act (USA) |
| TDG | Transportation of Dangerous Goods (Canada) |
| TIH | Toxic by Inhalation Hazard |
| TLV | Threshold Limit Value |
| TPQ | Threshold Planning Quantity |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average |
| UN | United Nations (Number) |
| VOC | Volatile Organic Compound |
| vPvB | Very Persistent Very Bioaccumulative Chemical |
| WGK | Wassergefährungsklassen (Germany: Water Hazard Classes) |
| WHMIS | Workplace Hazardous Materials Information System |

*One or more of the above-listed items may not appear in this document.

Full text of H-Statements referred to under sections 2 and 3:

| | |
|-----------------|--------------------------------------|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Acute aquatic toxicity |
| Aquatic Chronic | Chronic aquatic toxicity |
| H317 | May cause an allergic skin reaction. |
| H332 | Harmful if inhaled. |

H360
H402
H412

May damage fertility or the unborn child.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

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