

# MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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## SECTION 1 Product Identification

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**CHEMICAL NAME:** Germanium (IV) oxide  
**CAS #:** 1310-53-8  
**FORMULA:** GeO<sub>2</sub>  
**SYNONYM:** Germanium oxide, Germanium dioxide, Germania.

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## SECTION 2 Composition and Information on Ingredients

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INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	1310-53-8	100	no data	no data

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## SECTION 3 Hazards Identification

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**EMERGENCY OVERVIEW:** The dust may irritate the eyes, and respiratory system. Chronic inhalation hazard.  
**PRIMARY ROUTES OF EXPOSURE:** Inhalation  
**EYE CONTACT:** The dust may cause slight to mild irritation of the eyes. Symptoms include redness, and pain.  
**SKIN CONTACT:** The dust may cause slight irritation and dryness of the skin.  
**INHALATION:** The dust may be irritating to the nose, mucous membranes and respiratory tract. Symptoms include coughing, wheezing, and sore throat.  
**INGESTION:** No information available on the effects of ingestion.  
**CHRONIC HEALTH EFFECTS:** Prolonged inhalation of dust may produce chronic pulmonary edema.  
**ACUTE HEALTH EFFECTS:** Irritating to eyes and respiratory tract. Redness and pain in eyes and coughing and sore throat may result.

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## SECTION 4 First Aid Measures

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**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.  
**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.  
**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.  
**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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## **SECTION 5                      Firefighting Measures**

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**FLASH POINT:** not applicable  
**AUTO IGNITION TEMPERATURE:** none  
**EXPLOSION LIMITS:** none  
**EXTINGUISHING MEDIUM:** none. material is non flammable  
**SPECIAL FIREFIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.  
**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** no hazardous decomposition products.  
**UNUSUAL FIRE OR EXPLOSION HAZARDS:** No unusual fire or explosion hazards.

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## **SECTION 6                      Accidental Release Measures**

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**SPILL AND LEAK PROCEDURES:** Small spills can be mixed with vermiculite or sodium carbonate and swept up.

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## **SECTION 7                      Handling and Storage**

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**HANDLING AND STORAGE:** Store material in a tightly sealed container .

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## **SECTION 8                      Exposure Controls and Personal Protection**

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**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.  
**SKIN PROTECTION:** Chemical-resistant.  
**VENTILATION:** If possible, handle the material in an efficient fume hood.  
**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

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## **SECTION 9                      Physical and Chemical Properties**

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**COLOR AND FORM:** white powder., hexagonal (soluble) form  
**MOLECULAR WEIGHT:** 104.59  
**MELTING POINT (DEG. C.):** none  
**BOILING POINT:** no data  
**VAPOR PRESSURE:** no data  
**SPECIFIC GRAVITY:** 4.228  
**SOLUBILITY IN WATER:** insoluble

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## **SECTION 10                    Stability and Reactivity**

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**STABILITY:** air and moisture stable solid  
**HAZARDOUS POLYMERIZATION:** no hazardous polymerization  
**CONDITIONS TO AVOID:** none

**INCOMPATIBILITY:** active metals  
**DECOMPOSITION PRODUCTS:** none

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## **SECTION 11 Toxicological Information**

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**RTECS DATA:** Oral (rat); LD50: 1250 mg/kg. Inhalation (rat); LC50: >1420 mg/m<sup>3</sup>/4H. Intraperitoneal (rat); LD50: 750 mg/kg. Subcutaneous (rat); LD50: 1910 mg/kg. Oral (mouse); LD50: 1250 mg/kg. Intraperitoneal (mouse); LD50: 1550 mg/kg. Subcutaneous (mouse); LD50: 2550 mg/kg. Subcutaneous (rabbit); LD50: 845 mg/kg. Intraperitoneal (guinea pig); LDLo: 400 mg/kg~ Oral (rat); TDLo: 13650 mg/kg/13W-1. Oral (rat); TDLo: 10 mg/kg/14W-1. Inhalation (rat); TCLo: 309 mg/m<sup>3</sup>/6H/4W-1. Subcutaneous (rat); TDLo: 2450 mg/kg/35D-C.

**MUTAGENIC EFFECTS:** no data  
**TETRATOGENIC EFFECTS:** no data  
**CARCINOGENIC EFFECTS:** no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

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## **SECTION 12 Ecological Information**

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**ECOLOGICAL INFORMATION:** No information available

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## **SECTION 13 Disposal Considerations**

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**DISPOSAL:** Dispose of in according to local state and federal regulations.

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## **SECTION 14 Transportation Information**

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Non-hazardous

Non-hazardous

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## **SECTION 15 Regulatory Information**

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**TSCA:** Listed in the TSCA inventory  
**SARA (TITLE 313):** Title compound not listed

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## **SECTION 16 Other Information**

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