PRODUCT DATA SHEET

Germanium Dioxide

GeO_2

Introduction

Germanium dioxide is a white powder that is manufactured in both crystalline and amorphous forms. Its high refractive index (1.7) and optical dispersion properties make it useful in specialty optical materials, including infrared optics. **Germanium dioxide** is also used as a catalyst in the production of polyethylene terephthalate (PET) resin and as a raw material to produce other Germanium compounds.

More recently, **Germanium dioxide** in its rutile phase has gained interest as an ultrawide bandgap semiconductor material.

Germanium dioxide is available in two grades—Standard (Type A) and Fine (Type B).

Synonyms	Germanium (IV) Oxide, GeO_2
CAS Number	1310-53-8
EC Number	215-180-8
RTECS Number	LY5240000
Purity	99.999%
Appearance/Form	White powder
Crystal Structure	Hexagonal
Formula Weight	104.61
Theoretical Germanium Content	69.434%
Apparent Density	1.3–1.7g/cc
Melting Point	1,115°C
Solubility	Soluble in alkalis Slightly soluble in acids Slightly soluble in water

Product Type	PSD D90 (micron)*
Type A: Standard	<60
Type B: Fine	<20

**Particle size distribution, light scattering analysis*

Impurities	Typical	Maximum
Chloride	<0.05%	0.05%
Moisture (LOD)	<1.0%	2.0%
Volatile (LOI)	<3.0%	3.0%
	Typical ppm	**Maximum ppm**
Copper (Cu)	<1.0	3.0
Cobalt (Co)	<1.0	3.0
Aluminum (Al)	<1.0	3.0
Iron (Fe)	<2.0	3.0
Nickel (Ni)	<1.0	3.0
Zinc (Zn)	<1.0	3.0
Total Combined Metals	<3.0	10.0

Packaging

Germanium dioxide is packaged in a polyethylene bag and packed in a polyethylene container. Contact us for other packaging options.

Storage and Shelf Life

Germanium dioxide should be stored at room temperature in a tightly sealed container. When maintained under the recommended storage conditions, no specific shelf life is assigned to the product.

Technical Support

Indium Corporation sets the industry standard in providing rapid response, onsite technical support for our customers worldwide. Indium Corporation's team of Technical Support Engineers can provide expertise in all aspects of materials science.

Safety Data Sheets

Please refer to the SDS document within the product shipment or contact our local team to receive a copy.

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All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified.
Indium Corporation is an ISO 9001:2015 registered company.

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