

SAFETY DATA SHEET

Oxide Ceramic Sputtering Targets

According to:

- OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Globally Harmonized System (GHS)
- EU REACH Regulation

SECTION 1: Identification

Product Identifier

Oxide Ceramic Sputtering Targets

Synonyms

Oxide Ceramic Targets, Metal Oxide Targets, Ceramic Sputtering Materials

Typical Products Include

Al₂O₃, Y₂O₃, HfO₂, ZrO₂, TiO₂, ZnO, CeO₂, BiFeO₃, BiCrO₃, ITO, MgO, SiO₂ and related oxide ceramic sputtering targets.

Recommended Use

Thin film deposition, vacuum coating, sputtering applications, scientific research, industrial use.

Supplier

Thin-Film Materials

Email: sales@thinfilmmaterials.com

Website: <https://www.thinfilmmaterials.com>

SECTION 2: Hazard(s) Identification

GHS Classification

Solid articles are generally not classified as hazardous under normal handling conditions.

Dust generated from machining, grinding, or breakage may cause:

- Eye irritation
- Skin irritation
- Respiratory irritation

Signal Word

Warning

Hazard Statements

Not applicable for solid articles under normal handling conditions.

Precautionary Statements

P261: Avoid breathing dust.

P271: Use only in well-ventilated areas.

P280: Wear protective gloves and eye protection.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Hazards Not Otherwise Classified

None known for intact solid targets.

SECTION 3: Composition / Information on Ingredients

Component	CAS Number	Content
Metal Oxide Ceramic Materials	Various	>99%
Trace Impurities	Various	<1%

Product composition varies depending on target material.

SECTION 4: First-Aid Measures

Eye Contact

Flush with water for at least 15 minutes.

Skin Contact

Wash thoroughly with soap and water.

Inhalation

Move affected person to fresh air.

Ingestion

Rinse mouth with water. Seek medical attention if symptoms persist.

SECTION 5: Fire-Fighting Measures

Suitable Extinguishing Media

- Water spray
- Foam
- Dry chemical
- Carbon dioxide

Specific Hazards

Product is non-flammable.

Protective Equipment

Use standard firefighting protective equipment.

SECTION 6: Accidental Release Measures

Avoid generating airborne dust.

Collect fragments mechanically.

Use appropriate PPE during cleanup.

Avoid environmental release of particulate matter.

SECTION 7: Handling and Storage

Store in a dry, clean environment.

Avoid impact, dropping, and mechanical damage.

Handle with gloves to prevent contamination.

Avoid prolonged exposure to moisture.

SECTION 8: Exposure Controls / Personal Protection

Engineering Controls

Use local exhaust ventilation during machining or grinding.

Personal Protective Equipment

Eye Protection

Safety glasses or goggles

Skin Protection

Protective gloves

Respiratory Protection

Dust respirator if airborne particles are generated

SECTION 9: Physical and Chemical Properties

Property	Value
Physical State	Solid
Appearance	Ceramic target
Color	White, gray, black, or colored
Odor	Odorless
Solubility	Insoluble in water
Density	Varies by composition
Melting Point	High-temperature ceramic material

SECTION 10: Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions.

Conditions to Avoid

- Excessive mechanical stress
- Dust generation
- Contact with strong acids

Incompatible Materials

Strong acids and strong reducing agents.

SECTION 11: Toxicological Information

Likely Routes of Exposure

- Inhalation of dust
- Eye contact
- Skin contact

Symptoms

- Respiratory irritation
- Eye irritation
- Skin irritation

Chronic Effects

Long-term inhalation of dust should be avoided.

SECTION 12: Ecological Information

No known significant environmental hazards in solid form.

Avoid uncontrolled release to the environment.

SECTION 13: Disposal Considerations

Dispose in accordance with local, regional, and national regulations.

Industrial ceramic waste disposal methods are recommended.

SECTION 14: Transport Information

UN Number

Not regulated

Proper Shipping Name

Not classified as dangerous goods

Hazard Class

None

Packing Group

None

SECTION 15: Regulatory Information

This product is intended for industrial and research use only.

This SDS complies with:

- OSHA Hazard Communication Standard
- GHS Classification System
- EU REACH requirements (format reference)

SECTION 16: Other Information

The information provided herein is believed to be accurate and reliable. However, no warranty is expressed or implied regarding its accuracy or completeness. Users are responsible for determining the suitability of this material for their specific applications.