THIN-FILM MATERIALS
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Safety Data Sheet (SDS)
July 14, 2025

Magnesium Fluoride (MgF_2)

Product Name: MgF_2 Evaporation Materials
Chemical Name: Magnesium Fluoride
CAS Number: 7783-40-6
Purity: 99.9%
Appearance: 1–3 mm Pieces, White to off-white solid
Recommended Use: Vacuum evaporation coating, optical materials
Supplier: Keyue Advanced Materials LLC

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1. Identification

- **Product Name:** Magnesium Fluoride (MgF_2)
- **Synonyms:** Fluorure de Magnésium, Fluoruro de Magnesio
- **CAS No.:** 7783-40-6
- **Recommended Use:** Thin-film evaporation, optical coatings
- **Restrictions:** For industrial use only.

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2. Hazard Identification

GHS Classification: Not classified as hazardous under GHS.
Pictograms: None.

Potential Hazards:

- May cause mechanical irritation to eyes and respiratory tract (dust).
- Avoid generating airborne dust.

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3. Composition / Information on Ingredients

Component	Formula	CAS No.	Purity
Magnesium Fluoride	MgF_2	7783-40-6	99.9%

4. First-Aid Measures

Inhalation: Move to fresh air; seek medical attention if symptoms persist.
Skin Contact: Wash with soap and water.
Eye Contact: Rinse with clean water for several minutes.
Ingestion: Rinse mouth; seek medical attention if discomfort occurs.

5. Fire-Fighting Measures

- Not flammable.
- Suitable extinguishing media: Dry chemical, CO_2, water spray.
- Hazardous decomposition: Hydrogen fluoride (HF) may form at high temperatures.

6. Accidental Release Measures

- Avoid creating dust.
- Sweep up material and place in clean container.
- Use appropriate PPE (gloves, goggles, dust mask).

7. Handling and Storage

Handling:

- Avoid dust generation.
- Use with adequate ventilation.

Storage:

- Store in dry, cool, ventilated area.
- Keep container tightly sealed.

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8. Exposure Controls / Personal Protection

Exposure Limits: No OSHA PEL or ACGIH TLV for MgF_2.
Protection:

- Respirator: Dust mask if dust is generated.
- Gloves: Nitrile or latex.
- Eye Protection: Safety goggles.
- Engineering Controls: Local exhaust ventilation.

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9. Physical and Chemical Properties

- Appearance: White crystalline solid, 1–3 mm pieces
- Melting Point: 1263 °C
- Boiling Point: ~2239 °C
- Density: 3.18 g/cm³
- Solubility: Insoluble in water
- Odor: Odorless

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10. Stability and Reactivity

Stable under normal conditions.
Avoid moisture and strong acids.
Decomposition at high temperatures may release HF.

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11. Toxicological Information

Low toxicity.
Dust may irritate eyes, skin, and respiratory tract.
No known carcinogenicity.

12. Ecological Information

Not expected to pose significant environmental hazard.
Insoluble and stable in the environment.

13. Disposal Considerations

Dispose in accordance with local regulations.
Non-hazardous solid waste (USA: per 40 CFR definitions).

14. Transport Information

UN Number: Not regulated
DOT / IATA / IMDG: Not classified as hazardous
Hazard Class: None
Packing Group: None

15. Regulatory Information

- Not listed as hazardous under OSHA HCS (29 CFR 1910.1200).

- Not listed under REACH Annex XIV or SVHC.
- Not a controlled material for transport.

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16. Other Information

This SDS is intended for industrial use.
Users should evaluate suitability for their specific applications.