THIN-FILM MATERIALS

32 N Gould St., Sheridan, WY 82801, USA

Tel.: +1 (786) 825 8645 Email: sales@thinfilmmaterials.com
WhatsApp: Keyue Advanced Materials Website: www.thinfilmmaterials.com

Certificate of Analysis (CoA)

Sep. 28, 2025

Product Name: Samarium (Sm) Sputtering Target
Chemical Formula: Sm
Purity: 99.9% (3N)
Dimensions: Ø50.0 mm (±0.5 mm) × 1.0 mm (±0.1 mm)
Backing Plate: None
Lot Number: CSXK-25SC-0927TB
Quantity: 5 pieces
Manufactured by: Thin-Film Materials

Physical Description

- Form: Metallic sputtering target
- Appearance: Silvery-white, may exhibit slight yellowish surface oxidation
- Crystal Structure: Rhombohedral
- Theoretical Density: ~7.52 g/cm³
- Fabrication: Vacuum melting/casting and precision machining

Total Impurities (by ICP-OES / GDMS)

Element	Symbol	Max. Content (ppm)
Samarium	**Sm**	**Balance (>99.9%)**
Other Rare Earths (Total)	-	< 800
Gadolinium	Gd	< 50
Iron	Fe	< 30
Calcium	Ca	< 30

THIN-FILM MATERIALS

32 N Gould St., Sheridan, WY 82801, USA

Tel.: +1 (786) 825 8645 Email: sales@thinfilmmaterials.com
WhatsApp: Keyue Advanced Materials Website: www.thinfilmmaterials.com

Certificate of Analysis (CoA)

Sep. 28, 2025

Element	Symbol	Max. Content (ppm)
Oxygen	O	< 300

Handling & Storage

- Samarium is highly reactive and oxidizes rapidly in air. Handle under inert atmosphere (e.g., argon glove box) if possible.
- Store under argon or in vacuum-sealed packaging to minimize surface oxidation.
- Avoid exposure to moisture.

Declaration

We certify that this samarium target conforms to the specified purity and dimensional tolerances for thin-film research and development purposes.

Authorized Signature:

Inspection Certificate by: **Nancy Liu**

Approver by: **Chen Qiang** Chen Qiang