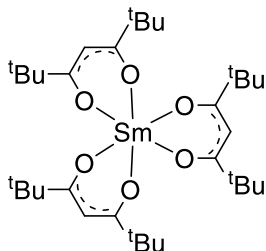


Catalog # 62-4000 Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)samarium(III) (99.9%-Sm) (REO)
[Sm(TMHD)3]



Thermal Behavior:

- Melting point: 195.5-198.5°C [1], 197-202 [2]
- Sublimation range: 174°C/AP [3]
- Decomposition: 241°C [3-4]
- TGA diagram and data is available in [3-4]

Technical Notes:

1. ALD/CVD precursor and dopant for samarium thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Sm ₂ O ₃	ALD	148-152°C	1.5-2.3 Torr	O ₃	300°C	5
Sm ₂ O ₃ :CeO ₂	CVD	-	-	Ce(thd) ₄ , O ₃	400-650°C	4
SmMnO ₃	ALD	139-141°C	1.5-2.3 Torr	Mn(thd) ₃ , O ₃	275°C	6
Sm _x Ti _y O _z	ALD	-	-	O ₃ , TiCl ₄ /H ₂ O	300°C	7
Sm ₂ O ₃ : ZrO ₂	CVD	200-240°C	-	Zr(thd) ₄	500-550°C	8

References:

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2. [Radiochim. Acta, 2019, 107, 1173.](#)
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4. [Thin Solid Films 2006, 510, 88.](#)
5. [Thin Solid Films 2005, 472, 275.](#)
6. [Chem. Mater. 2011, 23, 1835.](#)
7. [J. Vac. Sci. Technol. A, 2016, 34, 01A130.](#)
8. [Coatings 2020, 10, 1126.](#)