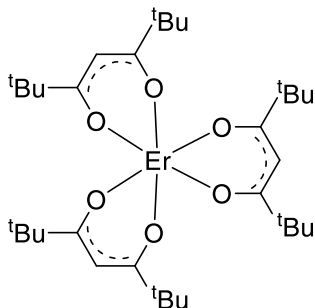


Catalog # 68-8750 Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)erbium(III), 99% (99.9%-Er) (REO)
[Er(TMHD)3]



Thermal Behavior:

- Melting point 179-180°C [1]
- Decomposition 345°C
- Sublimation 160°C/0.1 Torr
- TGA data and diagram is available in [2]
- Vapor Pressure: 0.1 Torr/180°C [4]

Technical Notes:

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

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Er ₂ O ₃	ALD ALD	130°C 150°C	1.5-2.25 Torr -	O ₃ O ₂	200-450°C 200-300°C	2-4 5
Er _x Y _y O	ALD ALD	- 130°C	- 1.5-3 Torr	O ₂ O ₃	350°C 300°C	6 7
Er _x Ga _{2-x} O ₃	ALD	130°C	1.5-2.25 Torr	Ga(acac) ₃ , O ₃	350°C	8
Er _x Ti _y O _z	ALD	130°C	-	TiCl ₄ , O ₃	300°C	9
Er _x Sc _y O _z	ALD	130°C	1.5-2.25 Torr	Sc(thd) ₃ , O ₃	300°C	10
Er _x Fe _y O _z	ALD	150°C	11-12 Torr	Fe(thd) ₃ , O ₃	275-350°C	11
Er:Gd ₃ Ga ₅ O ₁₂	ALD	200°C	0.5 Torr	O ₃ , Me ₃ Ga, Gd(thd) ₃	350°C	12

References:

1. [J. Am. Chem. Soc. 1965, 87, 5254.](#)
2. [J. Alloys Compd. 2004, 374, 124.](#)
3. [Thin Solid Films 2005, 472, 275.](#)
4. [Dalton Trans. 2013, 42, 10778.](#)

5. [Appl. Surf. Sci. **2005**, 246, 250.](#)
6. [J. Appl. Phys. **2007**, 101, 123116.](#)
7. [Phys. Status Solidi RRL, **2017**, 11, 1700076.](#)
8. [J. Mater. Chem. **2007**, 17, 1308.](#)
9. [Chem. Vap. Deposition **2015**, 21, 181.](#)
10. [J. Mater. Chem. **2010**, 20, 4207.](#)
11. [Thin Solid Films **2016**, 604, 18.](#)
12. [J. Lumin. **2022**, 241, 118544.](#)