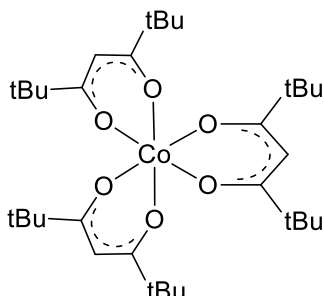


Catalog # 27-3000 Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)cobalt(III), 99% (99.9+%-Co) [Co(TMHD)3]



Thermal Behavior:

- Melting point: 240-245 °C [1, 2]
- Sublimation at 100 °C and 1 Torr [1]
- Solid state decomposition temperature: 286 °C [2]
- Vapor pressure 1.211 Torr at 150 °C [4], 2 Torr at 250 °C [8]

Technical Notes:

1. Thermally stable β diketonate precursor for ALD and CVD of cobalt oxide thin films.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Co ₃ O ₄	CVD	155-163 °C	30-60 Torr	O ₂	680-800 °C	[6]
Co ₃ O ₄	ALD	250 °C	5 Torr	O ₂	500 °C	[7, 8]
Sr _x Co _y Fe _z O	AACVD	180-220 °C in toluene	15 Torr, 630 Torr	O ₂ , Sr(tmhd) ₂ , Fe(tmhd) ₃	500-650 °C	[3]
Co:ZnO	CVD			O ₂ , Zn(tmhd) ₂	550 °C	[5]

References:

1. [Inorg. Chem. 1963, 2, 73](#)
2. [Bull. Chem. Soc. Jpn. 1974, 47, 2203](#)
3. [J. Mater. Res. 1998, 13, 173](#)
4. [Adv. Mater. Opt. Electron. 2000, 10, 223](#)
5. [Appl. Phys. Lett. 2006, 89, 232503](#)
6. [J. Cryst. Growth 2019, 525, 125207](#)
7. [Nanomaterials 2020, 10, 244](#)
8. [Nano Energy 2020, 71, 104564](#)