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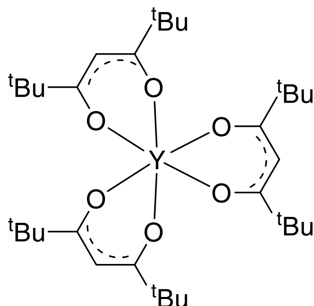
Catalog # 39-1000 Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)yttrium(III), 98+% (99.9%-Y) (REO) [Y(TMHD)3]



Thermal Behavior:

- Melting point 170-173°C, 166-169°C [1]
- TGA diagram and data is available in [2]
- Vapor pressure: 0.05 Torr at 95°C [3]

Technical Notes:

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

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Y_2O_3	ALD PE-ALD	120°C 200°C	1.5-2.25 Torr -	O_3 $^{PL}O_2$	200-425°C 200-300°C	2 3-4
YF_3	ALD	150°C	<7.5 Torr	TiF_4	175-325°C	5
$Y_xSc_yO_3$	ALD	125°C	1.5-2.25 Torr	$Sc(thmd)_3$; O_3	335-350°C	6
$Y_xCe_yO_3$	ALD	-	0.75-2.25 Tor	$Ce(thmd)_4$; O_3	300°C	7
$Y_xZr_yO_3$	ALD	-	1.5-2.25 Torr	Cp_2ZrCl_2, Cp_2ZrMe_2, $Zr(thd)_4$; O_3	275-375°C	8
Y_xMn_yO3	RE-ALD	-	-	$Mn(TMHD)_3$, O·	250°C	9
YVO_4:$YbVO_4$	ALD	128°C	2.1 Torr	$VO(thd)_2$, $Yb(thd)_3$; O_3	260-300°C	10

References:

1. *J. Am. Chem. Soc.* **1965**, *87*, 5254.
2. *Chem. Vap. Deposition* **2001**, *7*, 44.
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5. *Chem. Vap. Deposition* **2009**, *15*, 27.

6. *J. Mater. Chem.* **2006**, *16*, 563.
7. *Chem. Mater.* **2009**, *21*, 4614.
8. *Mater. Chem.* **2002**, *12*, 442.
9. *J. Magn. Magn. Mater.* **2020**, *498*, 166146.
10. *J. Mater. Chem. C*, **2017**, *5*, 8572.