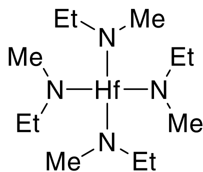
Catalog # 72-7720 Tetrakis(ethylmethylamino)hafnium, 99% (99.99+%-Hf, <0.15% Zr) TEMAH PURATREM



Thermal Behavior:
- Boiling point 79°C/0.1mm
- Decomposition temp.: 140°C [1]
- Vapor pressure: 0.1 Torr/83°C; 1 Torr/113°C [1]

Technical Notes:
1. ALD/CVD precursor for Hf thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
HfO_2	ALD ALD	60°C 115°C	7.5 Torr 0.1-0.5 Torr	H_2O O_3	150-325°C 140-400°C	2 3
Hf_3N_4	ALD	100°C	0.20-0.35 Torr	NH_3	150-250°C	4
HfF_4	ALD	67°C	1 Torr	HF·Py	150°C	5
HfS_2	ALD	120°C	4.5 Torr	H_2S^{Plasma}	150-500°C	6
$Hf_xAl_{1-x}O_y$	ALD	-	-	$AlMe_3$, H_2O	240°C	7
$Hf_xSi_{1-x}O_2$	ALD	68°C	0.68 Torr	$Si(OC^tBu)_4$	210-375°C	8
Hf:ZnO	ALD	80°C	0.1 Torr	Et_2Zn, H_2O	220°C	9
$Hf_{0.5}Zr_{0.5}O_2$	ALD	-	-	$Zr(NEtMe)_4$, O_2^{Plasma}	320°C, 280°C	10-11
$PbHf_xTi_{1-x}O_3$	ALD	82°C	1.8 Torr	$Ti(NMe_2)_4$, $Pb(DMAMP)_2$, H_2O, O_3	250°C	12

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