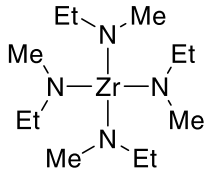
Catalog # 40-1710 Tetrakis(ethylmethylamino)zirconium(IV), 99% TEMAZ



Thermal Behavior:

- Decomposition: 140ºC [1]
- Vapor Pressure: 0.1 Torr/83°C, 1 Torr/113°C [1]

Technical Notes:

1. ALD/CVD precursor for Zr thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
ZrO_2	ALD PEALD ALD PEALD	110°C 80°C - -	0.5 Torr - - 3-5 Torr	H_2O $^{PL}O_2$ O_3 $^{PL}N_2O$	50-300°C 110-250°C 250°C 280°C	1 2 3 4
$Hf_xZr_yO_z$	ALD PELAD ALD	- - -	- - -	$Hf[N(EtMe)]_4$, O_3 $Hf[N(EtMe)]_4$, $^{PL}O_2$ $Hf[N(EtMe)]_4$, H_2O, O_3	280°C 280°C 250°C	5 6 7
Zr_3N_4	ALD	95°C	0.20-0.35 Torr	NH_3	150-250°C	8
ZrF_4	ALD	112°C	1 Torr	HF	150°C	9
ZrO_xF_y	ALD	110°C	1 Torr	HF, H_2O	150°	10

References:

1. *Chem. Mater.* **2002**, *14*, 4350.
2. *Electrochem. Solid-State Lett.* **2004**, *7*, F81.
3. *Electrochem. Solid-State Lett.* **2008**, *11*, G9.
4. *Chem. Mater.* **2009**, *21*, 4374.
5. *Adv. Mater.* **2016**, *28*, 7956.
6. *Phys. Rev. B*, **2010**, *82*, 094104.
7. *J. Vac. Sci. Technol. A*, **2013**, *31*, 01A115.
8. *Chem. Mater.* **2004**, *16*, 3497.
9. *Chem. Mater.* **2016**, *28*, 2022.
10. *J. Vac. Sci. Technol. A*, **2021**, *39*, 022403.