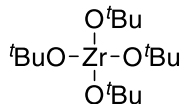


Catalog # 40-1750 Zirconium(IV) t-butoxide (99.99%-Zr) PURATREM



Thermal Behavior:

- Melting point: 2-3°C
- Boiling point: 56°C at 0.1 Torr [1]
- Vapor Pressure: 5 Torr at 90°C [2-3]

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	-	2 Torr	H ₂ O	80-140°C	4
	MLD	30°C	0.3 Torr	H ₂ O	170°C	5
	UV-ALD	35°C	2 Torr	H ₂ O	RT	6
	photo-ALD	RT	7.5 Torr	H ₂ O	150-245°C	7
	PE-ALD	90°C	1 Torr	^{PL} O ₂	250°C	8
	ALD	50°C	0.5-1 Torr	H ₂ O; O ₂ ; N ₂ O	150-300°C	9
	ALD	70-80°C	1 Torr	^{PL} Ar; ^{PL} O ₂	100°C	10
ZrF	ALD	65°C	1 Torr	HF·Py	150°C	11

References:

1. [J. Cryst. Growth, 1986, 74, 409](#)
2. [J. Chem. Soc. 1959, 748](#)
3. [Patent No EP 1184485 A1 \(2002\)](#)
4. [Adv. Mater. 2004, 16, 1197](#)
5. [Thin Solid Films 2009, 517, 4056](#)
6. [Thin Solid Films 2010, 518, 6432](#)
7. [J. Vac. Sci. Technol. A, 2019, 37, 060911](#)
8. [J. Appl. Phys. 2002, 92, 5443](#)
9. [Integr. Ferroelectr., 2004, 67, 41](#)
10. [Jpn. J. Appl. Phys. 2004, 43, L1296](#)
11. [Chem. Mater. 2016, 28, 2022](#)