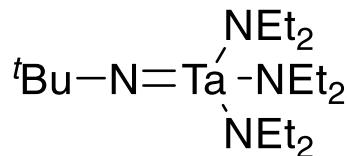


Catalog # 73-0723 (t-Butylimido)tris(diethylamino)tantalum(V), min. 98% (99.99%-Ta) PURATREM
TBTDET



Thermal Behavior:

- Vapor pressure: 0.021 Torr/70°C [1], 0.1 Torr/95°C [2], 0.031 Torr/70°C [4],
- Boiling point: 95°C/0.5 Torr
- Thermogravimetric analysis available in [10]

Technical Notes:

1.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
TaN _x	PEALD	70°C	1 Torr	^{PL} H ₂ , ^{PL} NH ₃	260°C	1
	ALD	95°C	-	NH ₃	250°C	2
	ALD	110°C	0.02 Torr	N ₂ H ₄	150-250°C	3
	ALD	70°C	1 Torr	H·	250°C	4
TaC _x N _y	PEALD	90°C	1 Torr	^{PL} H ₂	100-400°C	5
	PEALD	70°C	1 Torr	^{PL} NH ₃	100-400°C	6
	PEALD	-	-	^{PL} H ₂	200-260°C	7
	ALD	70°C	-	H ₂	100-400°C	8
	PEALD	70°C	1 Torr	^{PL} H ₂ /CH ₄	200°C	9
Ta ₂ O ₅	ALD	65°C	-	O ₃ , H ₂ O	125-475°C	10

References:

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6. [J. Electrochem. Soc. 2008, 155, H823.](#)
7. [J. Electrochem. Soc. 2009, 156, H852.](#)
8. [J. Electrochem. Soc. 2010, 157, H652.](#)
9. [Electrochem. Solid-State Lett. 2010, 13, H426.](#)
10. [Semicond. Sci. Technol. 2012, 27, 074003.](#)