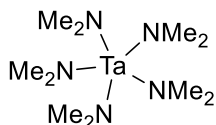


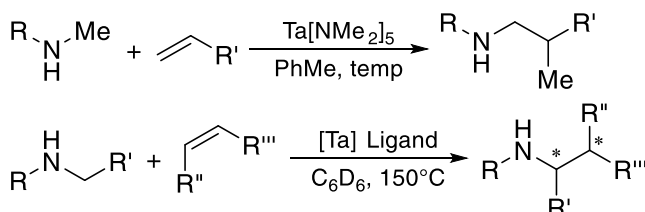
Catalog # 73-0800 Pentakis(dimethylamino)tantalum(V), min 98% PDMAT



Catalysis Applications

Technical Notes:

1. Catalyst for the direct hydroaminoalkylation of unactivated olefins with N-alkyl arylamines, dialkylamines and of secondary amines.



Tech Note (1)
Ref. (1-3)

References:

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CVD/ALD Applications

Thermal Behavior:

- Melting point (dec): ~180°C [1, 2]
- Sublimation: 80-90°C/0.1 Torr [1], 80°C/0.6 Torr [3]
- TGA diagram and data is available in [2, 4]
- Vapor pressure: 0.002 Torr/27°C [4], 0.05 Torr/55°C [5], 0.1 Torr/100°C [5-6]

Technical Notes:

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

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Ta ₂ O ₅	ALD; PEALD	65°C	0.01 Torr	H ₂ O; ^{PL} O ₂	150-250°C	7-8
Ta _x N _x	PEALD	65°C	0.01 Torr	NH ₃ / ^{PL} H ₂	200-275°C	9
	PEALD	75°C	0.008 Torr	^{PL} H ₂	225°C	10
	RPALD	75°C	0.008 Torr	^{PL} NH ₃ / ^{PL} H ₂ -N ₂	150-250°C	11
	PEALD	80°C		^{PL} NH ₃ , ^{PL} N ₂	50-250°C	12
	ALD	75°C	0.2 Torr	NH ₃ , Me ₃ (NH)NH ₂	200-375°C	13
ZnTa _x O _y	ALD	70°C		ZnEt ₂ , H ₂ O	170°C	14

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8. [J. Electrochem. Soc., 2010, 157, P66.](#)
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14. [Adv. Mater. Interfaces 2016, 3, 1600496.](#)