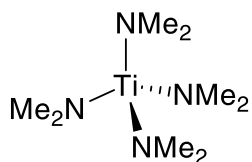


Catalog # 93-2240 Tetrakis(dimethylamino)titanium(IV), 99% TDMAT



Thermal Behavior:

- boiling point 50°C/0.5 Torr
- flash point -4°C
- Vapor pressure 1 Torr/60°C

Technical Notes:

1. ALD/CVD precursor mainly used for TiN [1,review] and TiO₂ based thin film depositions.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
TiN	PEALD ALD	40°C, 75°C	0.22 Torr ~1×10 ⁻² Torr	N ₂ , NH ₃ ; H ₂ N ₂ H ₄	100-300°C	2-4
TiO ₂	(PE)ALD	30°C, 75°C	10 ⁻⁷ Torr	H ₂ O; O ₂ Plasma	50-350°C	5-9
TiS _x	(PE)ALD	50°C, 180°C	10 ⁻⁶ Torr -	H ₂ S ^{Plasma} , H ₂ S	150-200°C 90-240°C	10-11
TiO _x N _y	PEALD	40°C	0.15 Torr	TTIP/NH ₃ , N ₂	250-450°C	12
Ti-Al-O	PEALD	-	-	AlMe ₃ , H ₂ O	200°C	13
M-Ti _x N _y M=Ru, Al, Nb Co	PEALD	40°C, 35°C 75°C, 50°C	3 Torr	Ru(EtCp) ₂ ; TMA; t-BuN(NEt) ₂ Nb; Co(AMD) ₂ ; N ₂ /H ₂	200°C 300°C	14-17
M-Ti _x N _y M= Pb, Pb/Hf	ALD	80°C	1.6 Torr	Pb(DMAMP) ₂ Hf(NMe ₂) ₄ H ₂ O; H ₂ O/O ₃	250°C	18-19

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