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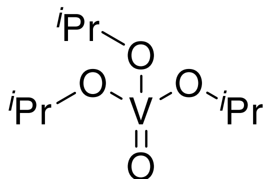
Catalog # 23-5000 Vanadium (V) tri-i-propoxy oxide, 98+% VTIP



Thermal Behavior:

- Boiling Point: 102°C/9 Torr [1], 80-82°C/2 Torr
- Melting Point: -14--11°C
- Vapor pressure: 0.29 Torr/45 ◦C [3]

Technical Notes:

1. ALD/CVD precursor for vanadium containing thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
V_2O_5	ALD	90-110°C	7.5-22.5 Torr	O_2	90-160°C	2
	ALD	45°C	-	H_2O	105°C	3-4
	PE-ALD	40°C	-	$^{PL}H_2O$; $^{PL}O_2$	50-300°C	5
	ALD	-	-	H_2O_2	100°C	6
		45°C	-	O_3	150-210°C	7
Bi:V_2O_5	ALD	45°C	-	$BiPh_3$, O_3	130°C	8
	ALD	45°C	-	$BiPh_3$, H_2O/ROH	130°C	9

References:

1. *Z. Anorg. Allg. Chem.* **1964**, *327*, 311.
2. *J. Phys. Chem. B*, **2003**, *107*, 10773.
3. *Appl. Surf. Sci.* **2006**, *252*, 5917.
4. *J. Power Sources* **2006**, *160*, 592.
5. *J. Electrochem. Soc.* **2009**, *156*, P122.
6. *J. Nanomater.* **2006**, 64501.
7. *Chem. Mater.* **2012**, *24*, 1255.
8. *ChemSusChem*, **2016**, *9*, 1727.
9. *J. Mater. Chem. A*, **2017**, *5*, 6060.