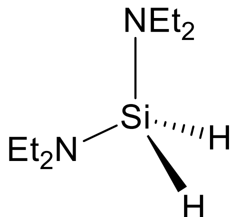
Strem Chemicals, Inc. **strem.com**

Catalog # 14-7030 Bis(diethylamino)silane, 97% BDEAS



Thermal Behavior:

- Melting point: < −10°C [1]
- Boiling point: 188°C [1]
- Vapor pressure: ~2 Torr at 25°C, 30 Torr at 70°C, ~100 Torr at 100°C [1-4, diagram are therein]
- TGA diagram and data is available in [1]

Technical Notes:

1. ALD/CVD precursor for Si thin films

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
$HfSiO_x$	ALD	70°C	-	$Hf(NEt_2)_4$, O_3	200-250°C	1
SiO_2	PEALD PEALD ALD ALD	50°C - - 55°C	- 3 Torr 10-20 Torr -	$^{PL}O_2$ $^{PL}O_2$ O_3 O_3	50-400°C 280°C 100-300°C 200°C	3-4 5 6 7
SiN_x	PEALD PEALD PEALD	- 60°C -	- 0.3 Torr 3 Torr	$^{PL}N_2$ $^{PL}N_2$ $^{PL}NH_3$	225-375°C 100-300°C 325°C	8 9 10

References:

1. *J. Electrochem. Soc.*, **2008**, *155*, G163.
2. *ECS Transactions*, **2011**, *35*, 191.
3. *J. Electrochem. Soc.*, **2012**, *159*, H277.
4. *Chem. Vap. Deposition* **2013**, *19*, 125.
5. *IEEE Electron Device Lett.* **2010**, 31, *857.*
6. *J. Vac. Sci. Technol. A*, **2015**, *33*, 01A137.
7. *Chem. Mater.* **2017**, *29*, 4920.
8. *Plasma Process Polym.* **2019**, *16*, 1900032.
9. *Nanotechnology*, **2021**, *32*, 075706.
10. *J. Vac. Sci. Technol. A*, **2016**, *34*, 01A136.