

ReCl₅

Thermal Behavior:

- Melting point: 220 °C [2]
- TGA data available in supporting information of [5]

Technical Notes:

1. Halide precursor for the deposition of **rhenium containing** thin films by CVD and ALD with high volatility and high thermal stability.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Re	ALD	110 °C	4-8 Torr	NH ₃	400-500 °C	[4]
Re	CVI	67-220 °C	380-760 Torr		674-1050 °C	[1]
Re	CVD	133-400 °C	758 Torr		1000-1300 °C	[3]
ReN _x	ALD	110 °C	4-8 Torr	NH ₃	250-400 °C	[4]
ReS ₂	ALD	110 °C	8 Torr	H ₂ S	120-500 °C	[5]

References:

1. [Chem. Vap. Deposition, 2003, 9, 59.](#)
2. [Chem-Asian J. 2008, 3, 1568.](#)
3. [Surf. Coat. Tech., 2015, 265, 38.](#)
4. [Angew. Chem. Int. Ed., 2018, 57, 14538.](#)
5. [Adv. Mater., 2018, 30, 1703622.](#)