

Catalog # 93-5102 Antimony(V) chloride, 99%

**SbCl<sub>5</sub>**

## Thermal Behavior:

- Melting point: 2.8°C
- Boiling point: 79°C/22 Torr; 92°C/30 Torr; 140°C
- Decomposes: from 106°C
- Vapor pressure: 14 Torr/68°C

## Technical Notes:

1. Used as a precursor and dopant for the deposition of antimony thin films
2. Used as oxidant in the oxidative chemical vapor deposition (oCVD) process for the preparation of poly(3,4-ethylenedioxythiophene) (PEDOT) [6-9] and Polyaniline (PANI) [10] films

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
SbO <sub>x</sub>	CVD ALD	120°C 40°C	AP -	MeCOOEt H <sub>2</sub> O or H <sub>2</sub> O <sub>2</sub>	550-600°C 80-200°C	1-2 3-4
Sb:SnO <sub>2</sub>	PE-CVD	35°C	1 Torr	SnCl <sub>4</sub> , O <sub>2</sub>	250-500°C	5

## References:

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4. [ACS Appl. Energy Mater. 2022, 5, 4041.](#)
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6. [ACS Appl. Polym. Mater. 2019, 1, 552.](#)
7. [Adv. Funct. Mater. 2021, 31, 2008712.](#)
8. [Appl. Surf. Sci. 2021, 554, 149501.](#)
9. [J. Vac. Sci. Technol. A, 2021, 39, 032413.](#)
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