The Silicon Precursor Toolbox
How Entegris Recommends Advanced Materials

Thanks to constant innovation, customers trying to solve a low-temperature deposition challenge face an overwhelming number of potential precursor solutions. To identify the appropriate precursor without relying on costly and time-consuming process development, Entegris has developed a toolbox of pre-screened precursors.

The precursor toolbox works like a decision tree, inputting design challenges associated with silicon semiconductor fabrication process steps. The goal is to narrow down the number of potential precursor materials.

Each of the toolbox inputs are compared to pre-screened results, revealing a qualified short list of precursor candidates as well as supporting recommendations for the deposition process.

DEPOSITION METHOD

- Plasma
- Thermal
- NH₃
- Plasma NH₃
- O₂
- O₃
- H₂O
- Plasma O₂

CO-REACTANT TYPE

- TMDC
- BDC
- Cl
- SiH
- ClSi
- CH₃CH₃
- CH₃
- SiCl

While there are still opportunities when it makes sense to develop custom chemistries, the Entegris precursor toolbox simplifies and speeds complex decision-making. This collaboration enables more efficient process development for semiconductor device manufacturers and their customers.

Learn More
www.entegris.com/precursor-toolbox