

Advanced Deposition Materials Innovation at Entegris

With semiconductor nodes shrinking to 10 nm and below and once-flat architectures evolving into complex 3D structures, whole new paradigms in material deposition must be developed. Entegris takes a holistic approach to advanced material development, yielding industry-leading innovation.

A CONTINUOUS PROCESS

Advanced Deposition Materials innovation has three major considerations:

1. Concept and Feasibility

Through close collaboration with chip and tool manufacturers, Entegris develops and tests candidate precursors for next generation films, devices, and process requirements. Film and process viability is demonstrated using in-house ALD and CVD tools.



2. Maintaining Purity Throughout the Delivery System

With ever-decreasing node sizes, Entegris maintains material purity from manufacturing source through customized containers and onto the wafer surface. Our supporting metrology advancements ensure film and process requirements are met.



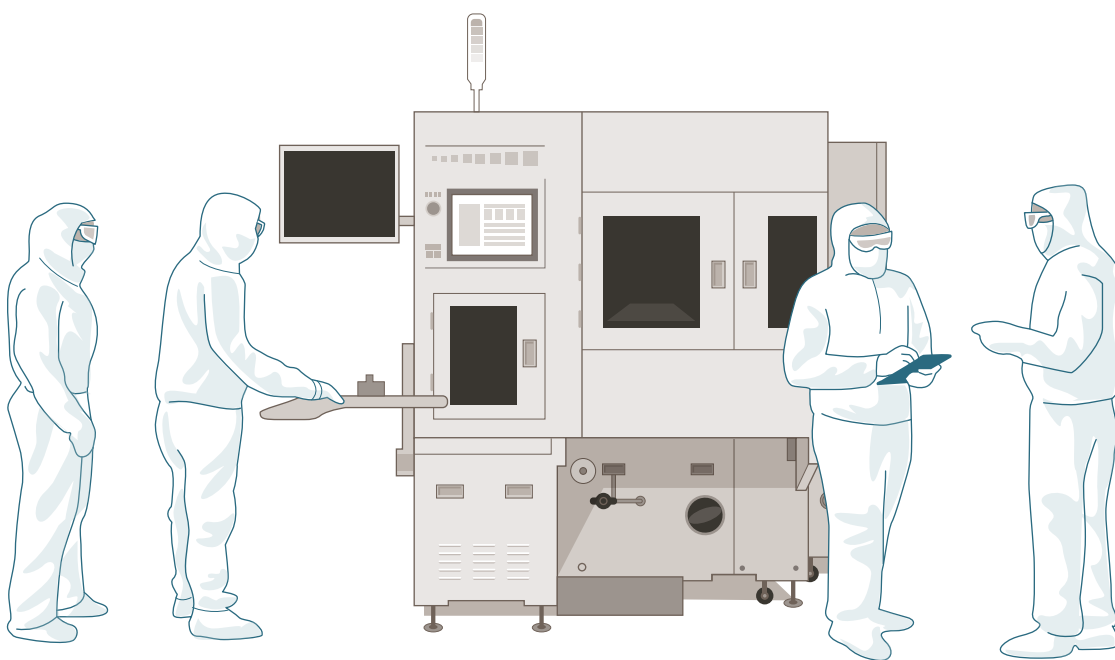
3. Scale-up to Meet Cost, Quality, and Capacity

Entegris ensures key product requirements identified during development are incorporated into high-volume manufacturing (HVM) consistently, using statistical process control (SPC). Cost, quality, and capacity improvement opportunities are identified and implemented throughout the product life cycle.



THROUGH THE EYES OF OUR CUSTOMERS

Entegris' continuous development process yields customized precursors and high-purity delivery systems designed and tested to work with customers' applications and equipment.



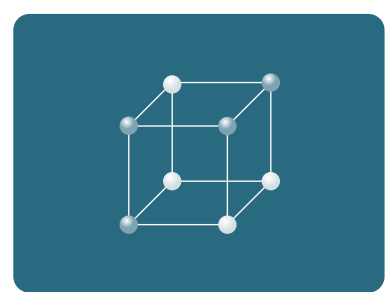
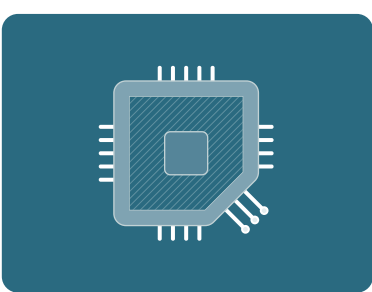
INFORMED BY ANALYTICS

Using state-of-the-art analytical instruments, techniques, and laboratories, Entegris' on-wafer and chemical measurements guide development, troubleshooting, and manufacturing control.



EXPERIENCE AS OUR GUIDE

For more than 50 years, Entegris has worked alongside semiconductor fabs through countless innovations to solve the most advanced technology challenges.



Learn More

www.entegris.com/advanced-deposition-materials