Entegris

PECVD AND PVD COATINGS

Coating to provide wear resistance, corrosion protection and lubricity

Overview

Entegris solves metallic and particle contamination problems on substrates and component parts with a family of specialty coatings. The proprietary low-temperature deposition processes provides wear-resistance, corrosion protection, erosion resistance and lubricity properties to a variety of surface finishes and complex 3-D shapes.

PECVD Coatings

Entegris specializes in deposition of high-performance coatings using a proprietary low-temperature (<150°C [302°F]) Plasma Enhanced Chemical Vapor Deposition (PECVD) process. The coatings are deposited in high vacuum by plasma decomposition of precursor gases. PECVD deposition is applied on a variety of vacuum compatible substrates including metals, alloys, ceramics, semiconductors and polymers.

PECVD Coating Benefits

- Amorphous and dense
- Ultra-high purity (99.999%)
- Microconformal – replicating the surface finish of the substrate
- Deposited on variety of substrates including metals, ceramics and polymers
- Uniform deposition on complex 3-D objects
- Wide area coating

PECVD Coating Process Capabilities

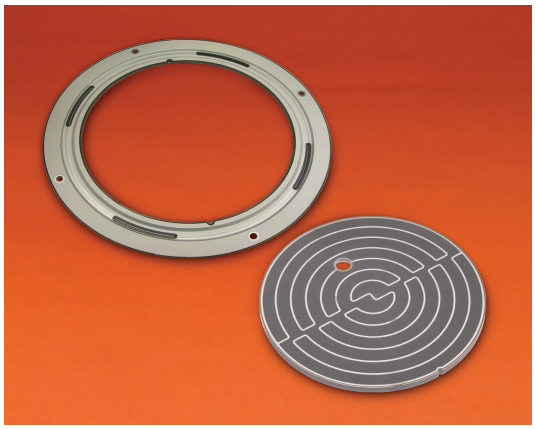
Entegris has chambers of different shapes and sizes that can accommodate substrate sizes ranging from 304 mm to 914 mm (12" to 36").

High-purity PECVD coatings: silicon, silicon carbide, silicon nitride and silicon oxide

Hard carbon coatings: UltraC™ Diamond, UltraC-L, UltraC-EC and UltraC-HT

PVD Coatings

Entegris specializes in the deposition of metal and metal-alloy coatings by a variety of Physical Vapor Deposition (PVD) processes by sputtering. The PVD process can be used to deposit coatings on a variety of vacuum-compatible substrates including metals, ceramics and polymers at low temperature (<250°C [482°F]). The coatings are dense, strongly adherent and micrograined.



Specialty PVD coatings: yttria, alumina, aluminum oxynitride, metals and cermets

PVD Coating Benefits

- Dense and micrograined
- Deposited on a variety of substrates including metals, ceramics and polymers
- Specialty coatings of alumina, aluminum nitride, aluminum oxynitride and yttria are deposited at a faster rate of deposition than traditional methods and materials

PVD Coating Process Capabilities

Entegris has variety of chamber sizes capable of depositing coatings on parts up to 965 mm (38") in diameter. Entegris utilizes a variety of processes to deposit various metals and alloys.

- Radio frequency diode sputtering
- DC diode sputtering
- DC or RF magnetron sputtering
- Pulsed magnetron sputtering
- Reactive sputtering

For More Information

To learn more about how Entegris' high-purity specialty coatings help customers enhance yields, improve productivity and meet future technological needs, call Entegris at +1 781-538-8745.

To review Entegris' specialty coatings offering, visit Entegris' website at *www.EntegrisSpecialtyCoatings.com.*

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