

SilcoGuard®

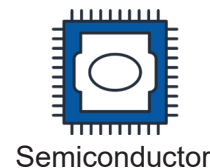
Providing high purity coatings that minimize out gassing and enhance ultra-high vacuum productivity.

Overview

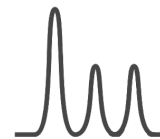
The SilcoGuard® coating process creates a multi-layered barrier coating of amorphous silicon designed specifically for low out gassing characteristics (patent info at www.silcotek.com/IP). These barrier coatings help repel moisture while not interfering with knife-edge or seal integrity due to its thin profile. System contamination is quickly removed with SilcoGuard treated vacuum components.

Key Applications and Benefits

- Reduce vacuum pump-down times
- Improve yields by preventing wall reactivity and ion contamination
- Eliminate burn-in or stabilization



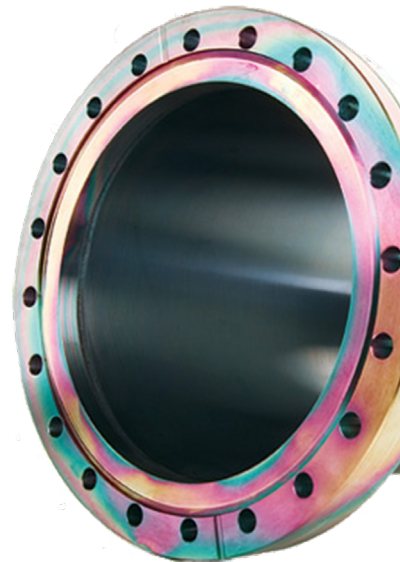
Semiconductor



Research/Analytical



Vacuum Processing

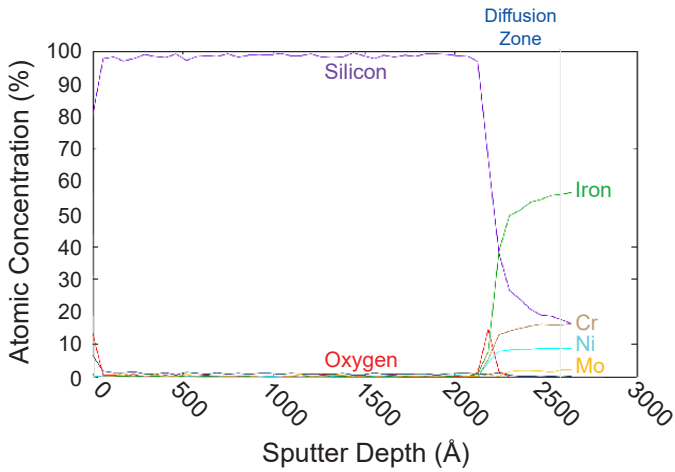


SilcoGuard® Properties

Coating Structure:	Hydrogenated amorphous silicon (a-Si:H)
Deposition Process:	Thermal chemical vapor deposition (not plasma-enhanced)
Maximum Temperature:*	Advertised properties, before crystallization: 720° C Melting: 1410° C
Substrate:	Compatibility: Stainless steel, exotic alloys, ceramics Size: Typical parts up to 80" (203 cm), contact us for larger jobs. Geometry: Any shape, including complex geometries
Typical Thickness:	180 - 600 nm
Hydrophobicity (contact angle):	≥20°
Allowable pH Exposure:	0 - 8

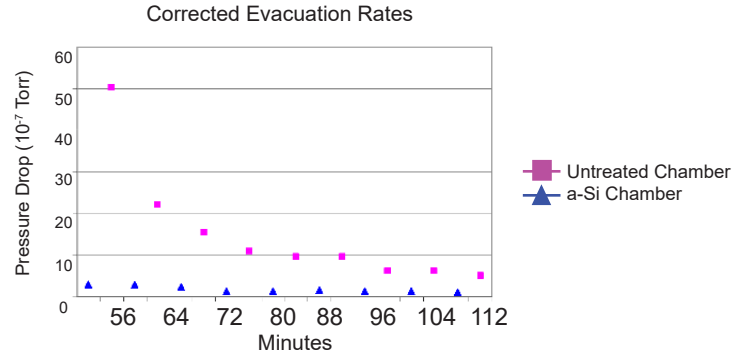
CHEMICALLY COMPATIBLE

The amorphous silicon structure provided by the SilcoGuard process provides excellent barrier properties in a variety of applications.



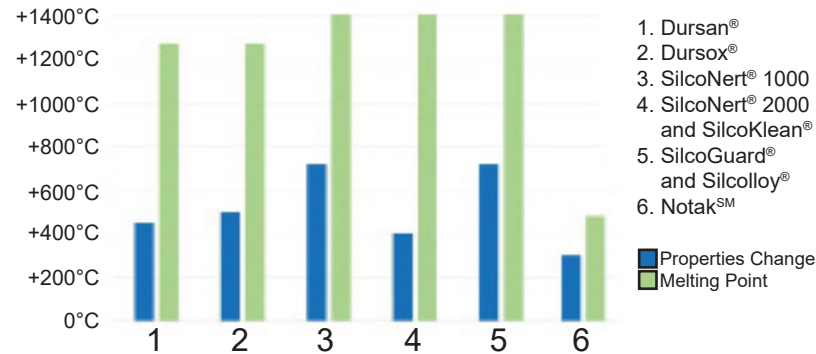
LOW OUT GASSING

The SilcoGuard process improves vacuum pump-down performance by more than 3x.



HIGH-TEMPERATURE STABLE

Coatings produced by the SilcoGuard process are stable and inert at temperatures up to 1410°C, providing a coating option for high temperature





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