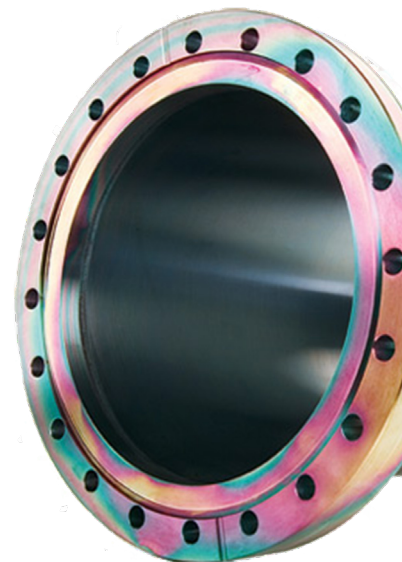




Providing high purity coatings that minimize out gassing and enhance ultra-high vacuum productivity.

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



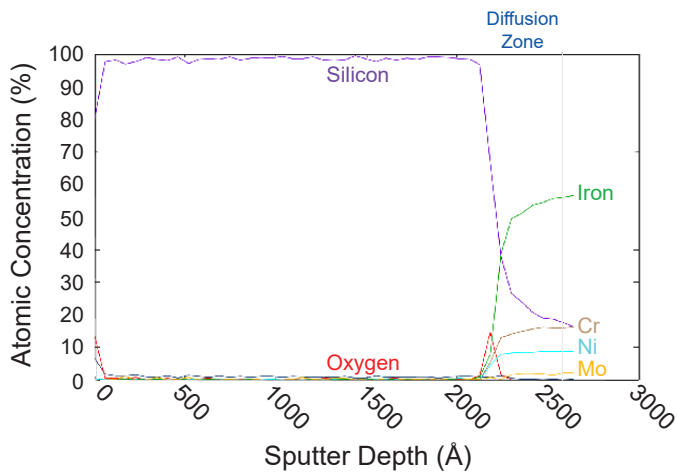
Vacuum Processing

SilcoGuard® Properties

Coating Structure:	Hydrogenated amorphous silicon (a-Si:H)	
Deposition Process:	Thermal chemical vapor deposition (not plasma-enhanced)	
Maximum Temperature:*	600° 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):	$\geq 20^\circ$	
Allowable pH Exposure:	0 - 8	

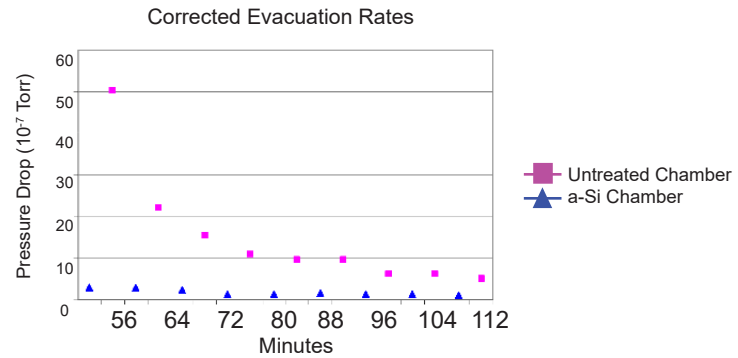
CHEMICALLY COMPATIBLE

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



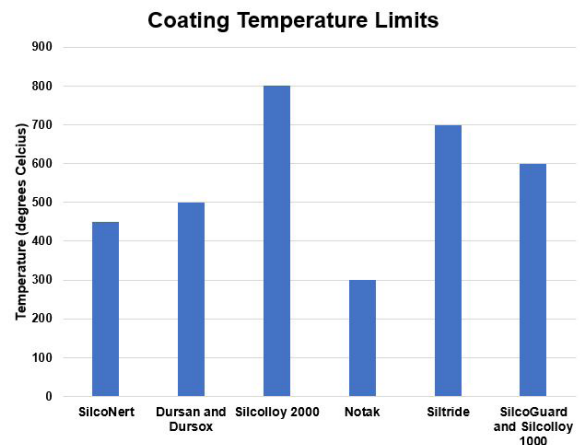
LOW OUT GASSING

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 600°C, providing a coating option for high temperature analytical or general barrier applications.





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