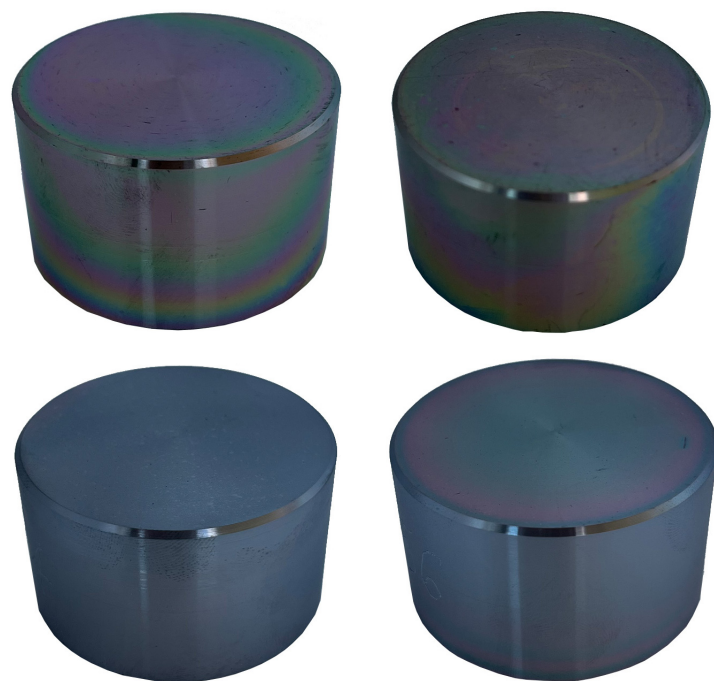


SilcoNert® 2000

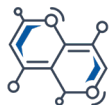
The ultimate inert coating technology.

Previously known as Sulfinert® and Siltek®, the SilcoNert 2000 coating process results in a chemically protective barrier of amorphous silicon that is further functionalized to provide the ultimate inert surface. Applied via chemical vapor deposition (CVD), SilcoNert 2000 is ideal when trace-level testing accuracy (<PPM) of sulfurs, mercury, ammonia, or other active compounds is imperative.

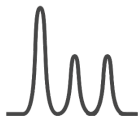
SilcoNert 2000-coated parts may vary in appearance based on coating thickness and substrate material. All pictured samples (right) meet technical specifications, 100 - 500 nm.



Stack & Flare



Chemical Processing



Analytical



Oil & Gas

Applications & Benefits

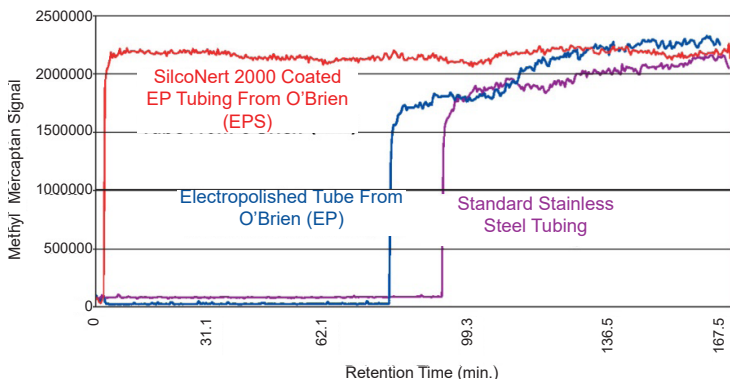
- Non line-of-sight process, all holes and complex geometries will be coated.
- Eliminate adsorption and retesting.
- Obtain faster calibrations.
- Gain full confidence in your analytical results.

SilcoNert® 2000 Properties

Coating Composition:	Functionalized hydrogenated amorphous silicon
Deposition Process:	Thermal chemical vapor deposition (not-plasma enhanced)
Maximum Temperature:*	Max for functionalization: 400°C (oxidative) 450°C (inert)
Substrate:	Compatibility: Stainless steel, exotic alloys, ceramics, aluminum Size: Typical parts up to 80" (203 cm), contact us for larger jobs Geometry: Any shape, including complex geometries
Typical Thickness:	100 - 500 nm
Hydrophobicity (contact angle):	≥65°
Allowable pH Exposure:	0 - 8

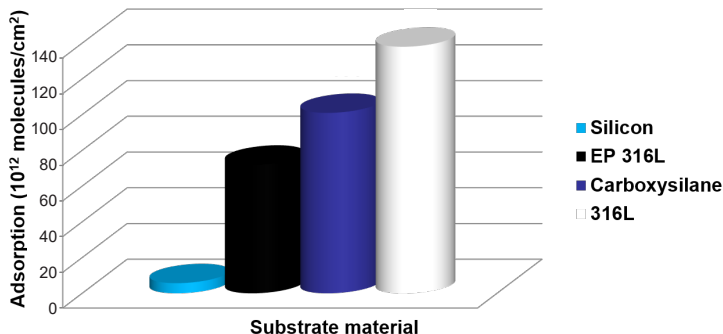
Inert to Active Compounds

Inert to Sulfurs - Tubing coated with SilcoNert 2000 provides nearly instant sample response, requiring no priming of the analytical system.



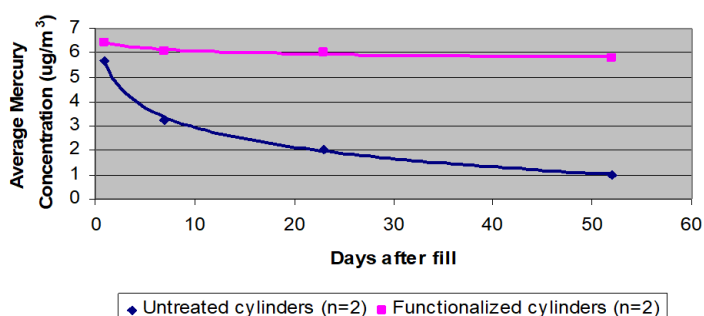
Inert to Ammonia - Inertness enabled by SilcoNert 2000 permits 12x faster response than when using electropolished stainless steel.

Adsorption totals of ammonia on different substrates



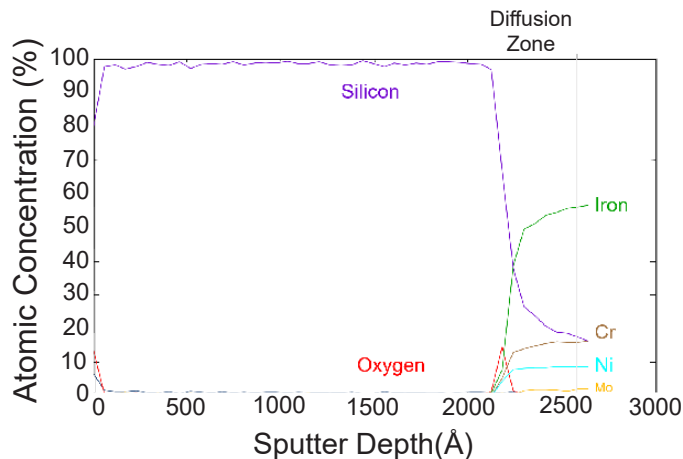
Inert to Mercury - SilcoNert 2000 provides sample components excellent stability for mercury storage, even after weeks.

Average Mercury Response Comparison of Stainless Steel vs. Silicon Functionalized Surfaces



Chemically Compatible

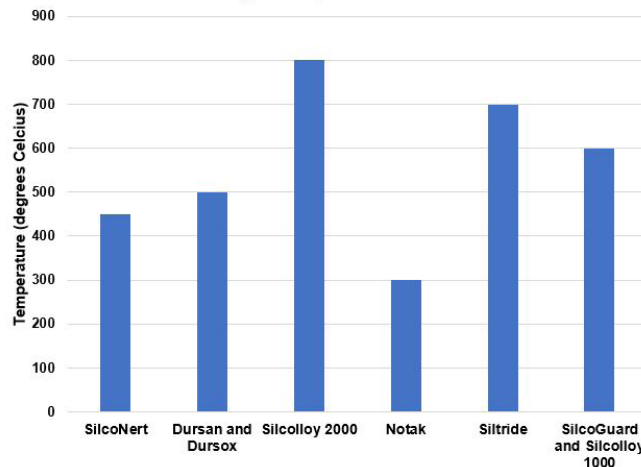
The functionalized silicon structure deposited by SilcoNert 2000 provides a highly inert barrier to analytes of interest.



High Temperature Stability

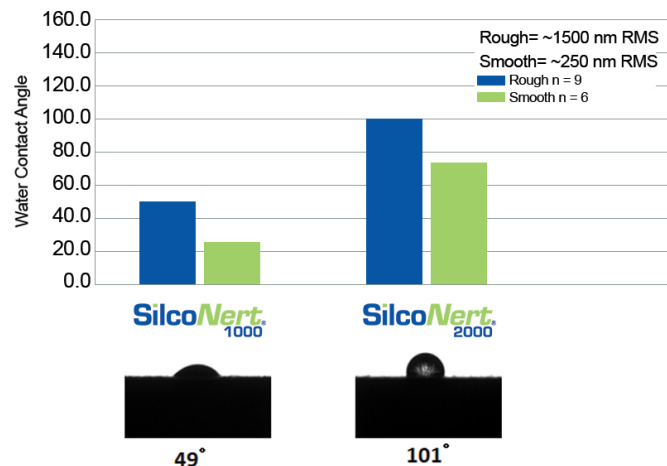
SilcoNert 2000 maintains its robust and inert properties up to 450° C, far exceeding the limits of PTFE.

Coating Temperature Limits



Non-Wetting

SilcoNert 2000 doubles the hydrophobicity of stainless steel and is commonly specified in moisture analyzer applications.



*SiltrideSM refers to the Siltride process, a thermal CVD that is performed on customer parts to have the properties identified above.