

# SilcoNert® 2000

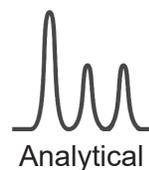
Providing the ultimate inert coating technology. Also known as Sulfinert® and Siltek®

## Overview

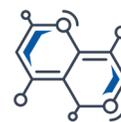
The SilcoNert® 2000 coating process results in a chemically protective barrier of amorphous silicon that is further functionalized to provide the most inert surface available (patent info at [www.silcotek.com/IP](http://www.silcotek.com/IP)). Applied via chemical vapor deposition (CVD), the SilcoNert 2000 process is ideal when trace-level testing accuracy (< parts-per-million) of sulfurs, mercury, ammonia, or other active compounds is imperative.

## Key Applications and 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



Analytical



Chemical Processing



Stack &amp; Flare



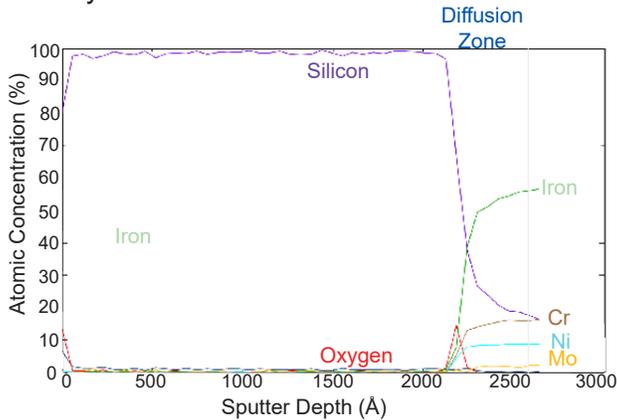
Oil &amp; Gas/Refining

## SilcoNert® 2000 Properties

<b>Coating Structure:</b>	Functionalized hydrogenated amorphous silicon
<b>Deposition Process:</b>	Thermal chemical vapor deposition (not plasma-enhanced)
<b>Maximum Temperature*:</b>	Max for functionalization: 400° C (oxidative) 450° C (inert) Melting: 1410° C
<b>Substrate:</b>	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
<b>Typical Thickness:</b>	100 - 500 nm
<b>Hydrophobicity (contact angle):</b>	≥ 65°
<b>Allowable pH Exposure:</b>	0 - 8

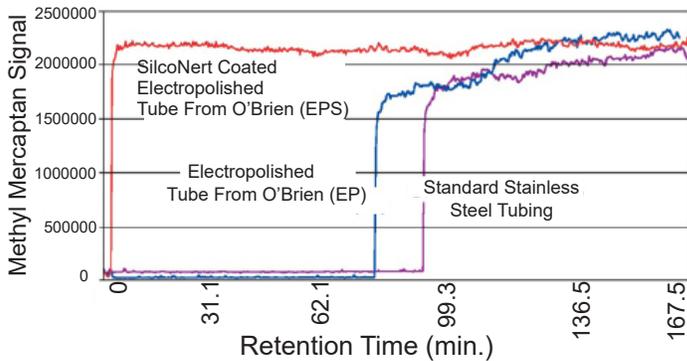
## CHEMICALLY COMPATIBLE

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



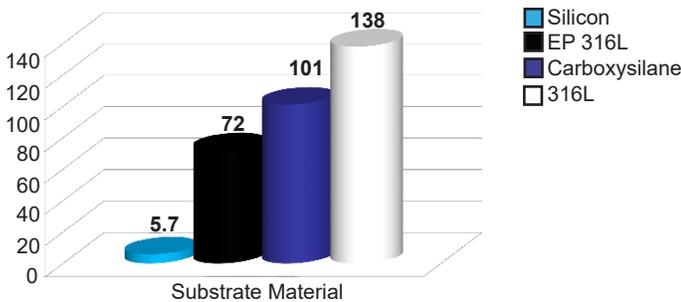
## INERT TO SULFURS

Tubing coated by SilcoNert 2000 provides nearly instant sample response, requiring no "priming" of the analytical system.



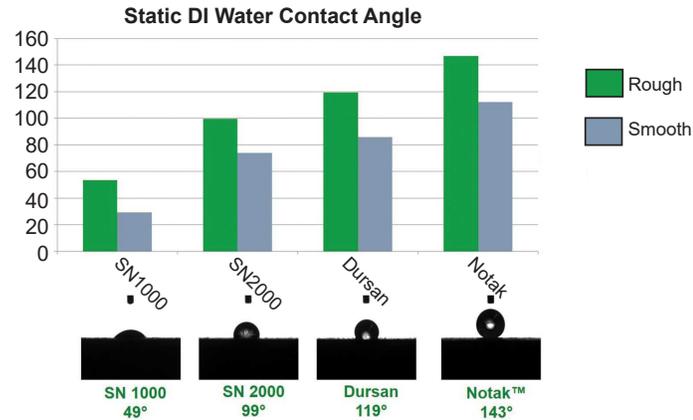
## INERT TO AMMONIA

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



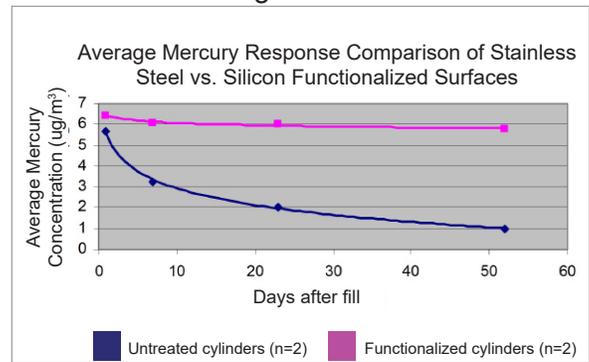
## NON-WETTING

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



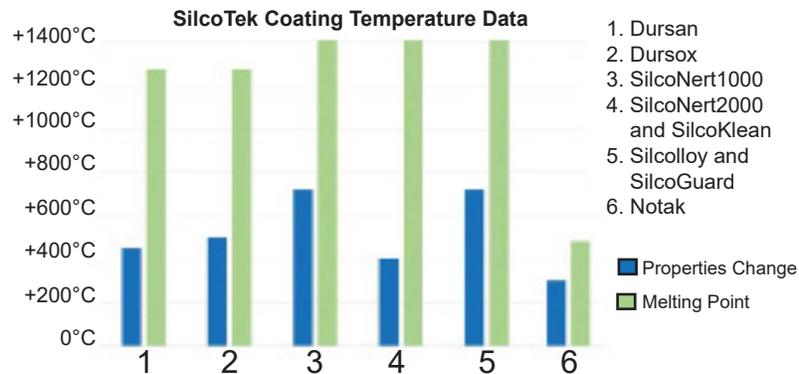
## INERT TO MERCURY

SilcoNert 2000 provides sample components excellent stability for mercury samples, even after several weeks of storage.



## HIGH-TEMPERATURE STABLE

Coatings produced by SilcoNert 2000 are robust and inert for use up to 450°C, far exceeding the limits of PTFE.



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