

# SilcoNert<sup>®</sup> 2000

The ultimate inert coating. Also known as Sulfinert<sup>®</sup> and Siltek<sup>®</sup>

## Overview

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

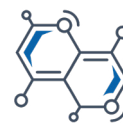


## Key Applications and Benefits

- 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 & Flare



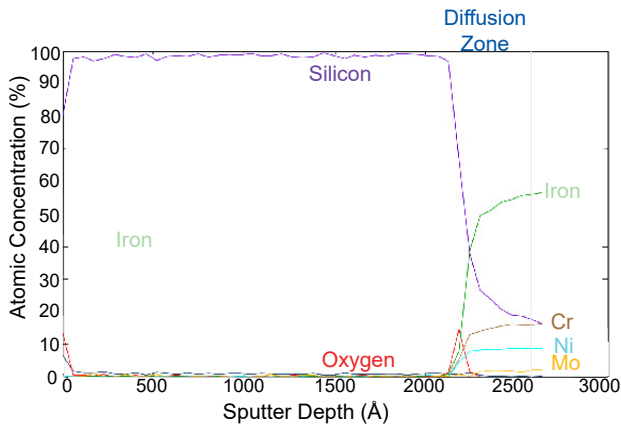
Oil & Gas/Refining

## SilcoNert<sup>®</sup> 2000 Specifications

<b>Coating Structure:</b>	Functionalized hydrogenated amorphous silicon
<b>Deposition Process:</b>	Thermal chemical vapor deposition (not plasma-enhanced)
<b>Maximum Temperature*:</b>	450° C (inert atmosphere) 400° C (oxidative)
<b>Substrate:</b>	Compatibility: Stainless steel, exotic alloys, ceramics Size: Up to 78" (198 cm) Geometry: Any shape, including complex geometrics
<b>Typical Thickness:</b>	100 - 500 nm
<b>Hydrophobicity (contact angle):</b>	≥ 65°
<b>Allowable pH Exposure:</b>	0 - 8

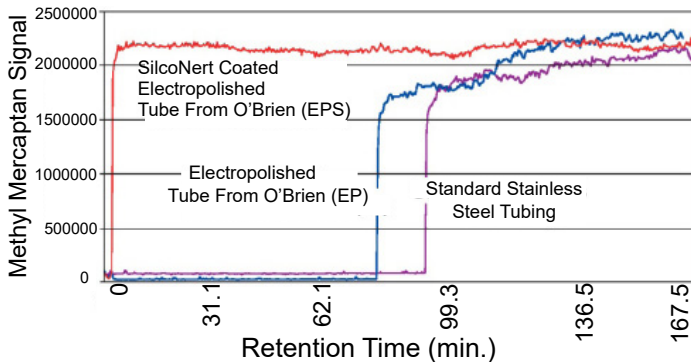
## CHEMICALLY COMPATIBLE

SilcoNert 2000's functionalized silicon structure provides a highly inert barrier to analytes of interest.



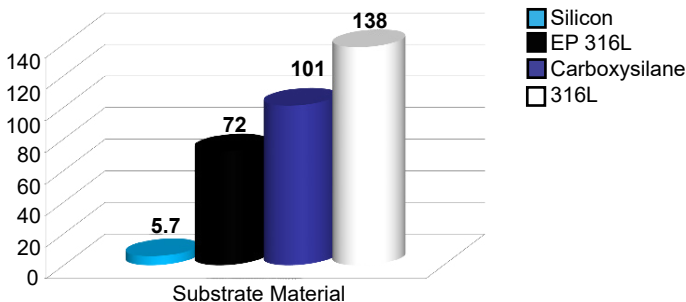
## INERT TO SULFURS

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



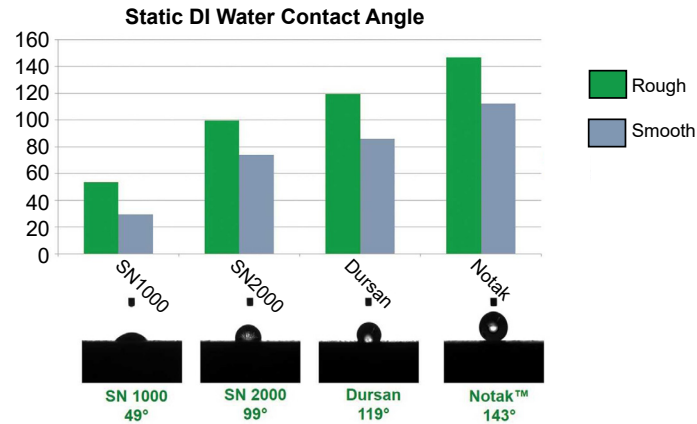
## INERT TO AMMONIA

SilcoNert 2000's inertness to ammonia enables 12x faster response than when using electropolished stainless steel.



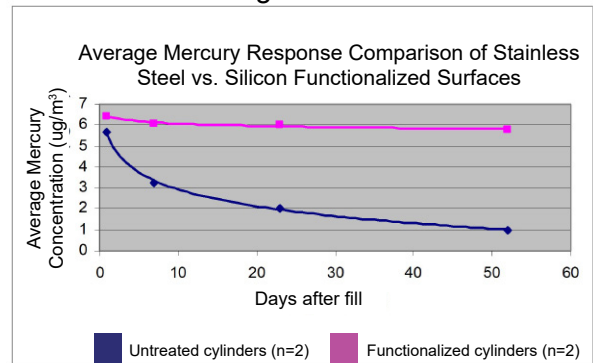
## NON-WETTING

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



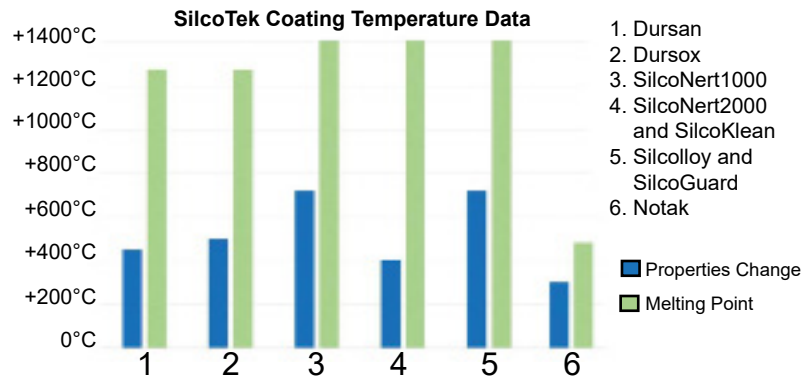
## INERT TO MERCURY

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



## HIGH-TEMPERATURE STABLE

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



225 Penn Tech Drive  
Bellefonte, PA 16823

+1 (814) 353-1778

silcod@silcotek.com

www.silcotek.com