

# SilcoNert<sup>®</sup> 1000

The original inert coating technology.  
Also known as SilcoSteel<sup>®</sup>.

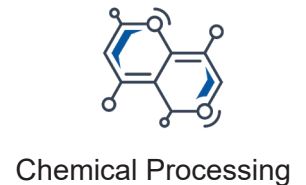
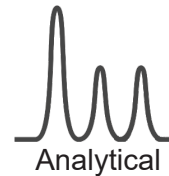
## Overview

The SilcoNert<sup>®</sup>1000 coating process (patent info at [www.silcotek.com/IP](http://www.silcotek.com/IP)) deposits a chemically protective barrier of amorphous silicon that is excellent for general purpose barrier applications. Applied via chemical vapor deposition (CVD), the SilcoNert<sup>®</sup>1000 process is ideal for any flow path or other application where preventing a reaction between substrate and process gas, fluids, or other media is necessary.



## Key Applications and Benefits

- Non-line-of-sight process; all holes and complex geometries will be coated
- Eliminate adsorption and retesting
- Obtain faster calibrations
- Improve inertness at high temperatures

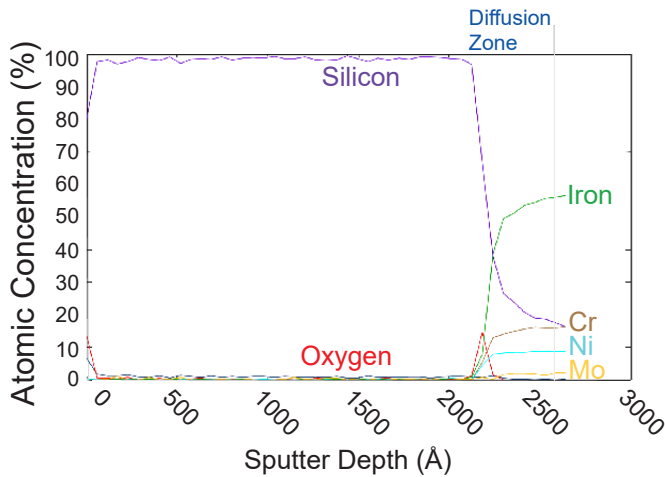


## SilcoNert<sup>®</sup> 1000 Properties

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:	Up to 80" (198 cm), contact us for larger jobs.
	Geometry:	Any shape, including complex geometrics
Typical Thickness:	100 - 500 nm	
Hydrophobicity (contact angle):	≥40°	
Allowable pH Exposure:	0 - 8	

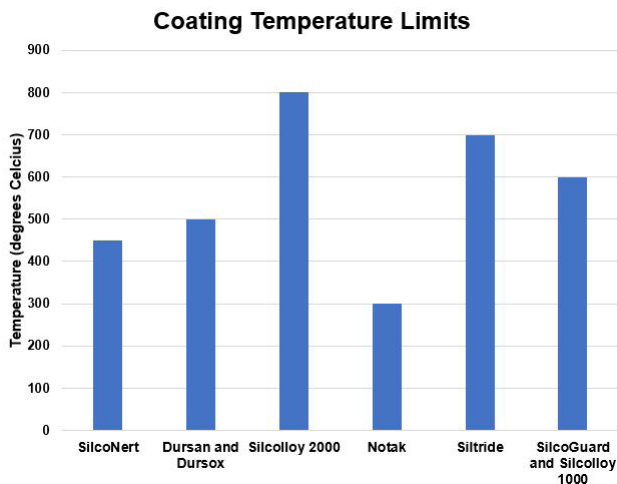
## CHEMICALLY COMPATIBLE

SilcoNert 1000's amorphous silicon structure provides excellent barrier properties in a variety of applications.



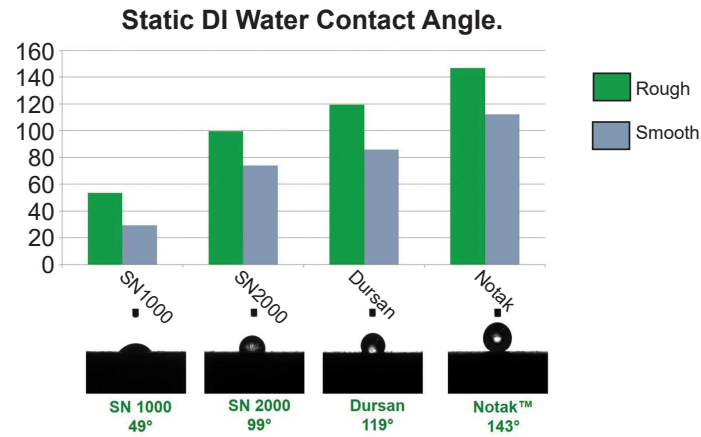
## HIGH-TEMPERATURE STABLE

SilcoNert 1000 is stable and inert at temperatures up to 600°C, providing a coating option for high temperature analytical or general barrier applications.



## HYDROPHOBICITY COMPARISON

SilcoNert 1000 offers a general purpose moisture barrier that improves hydrophobicity over uncoated stainless steel.



## PURE

SilcoNert 1000 is a chemically pure layer that improves compatibility between your equipment and process stream.

Element	Coating Contents
Aluminum	<20 ppm
Chromium	0 ppm
Iron	<100 ppm
Nickel	<10 ppm
SilcoTek Silicon CVD Coating	99.98% purity



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