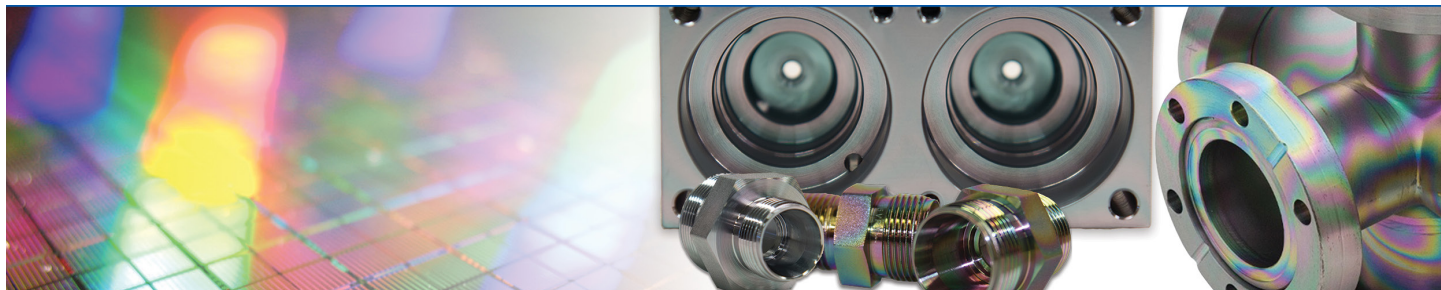


# SilcoTek® Silicon CVD Coatings

Game-Changing Surface Technology for your Next-Generation Products



## Overview

As electronic devices get smaller and technology nodes continue to shrink, semiconductor manufacturers and equipment suppliers are faced with bigger production challenges than ever before.

SilcoTek® silicon CVD coatings increase system uptime, throughput, and overall product life by solving corrosion and metal contamination problems. This ultimately improves production yields and increases profitability.

## Key Application Features

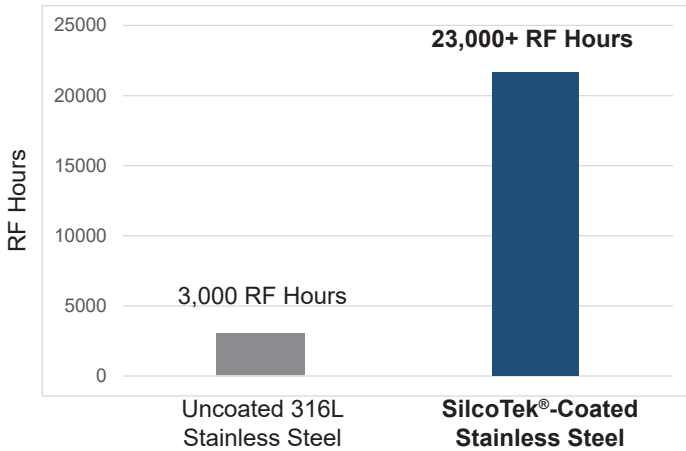
- **Etch** - prevents ion contamination from corrosive gas streams
- **Deposition** - eliminates particulate generation and carryover while reducing corrosion
- **Gas delivery** - creates a barrier to corrosion and contamination
- **Exhaust** - reduces particulate backstreaming and mitigates corrosion

## Specifications

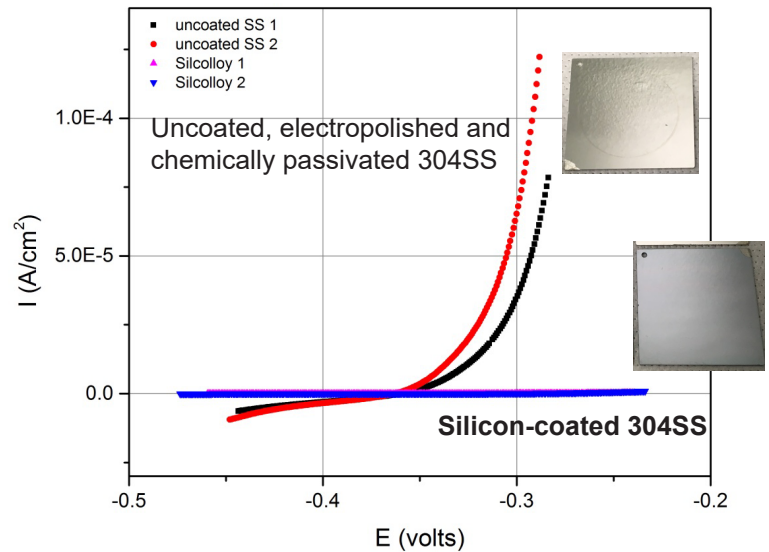
Coating structure:	Hydrogenated amorphous silicon (a-Si:H)	
Deposition process:	Thermal chemical vapor deposition (not plasma-enhanced)	
Temperature:	Deposition	Up to 400°C (752°F)
	Use	-210°C to 1400°C+ (-346°F - 2552°F+)
Substrate:	Compatibility	Stainless steels, exotic alloys, ceramics
	Size	Up to 78" (198 cm)
	Geometry	Any shape, including complex geometries
Coating thickness:	50-1500 nm	
Purity:	99.98%	
Ideal use:	Acidic, oxidative, and high purity-critical environments	

# Performance Data & Benefits

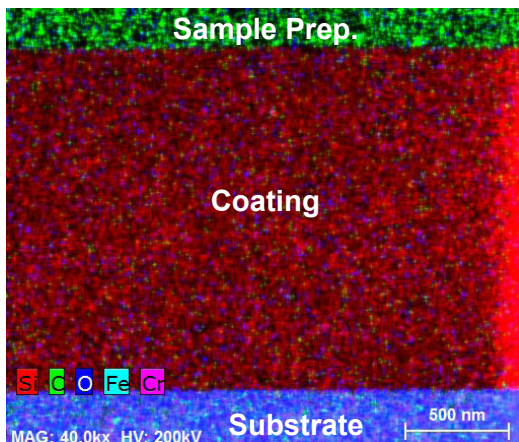
## Increased Equipment Uptime 6M HBr for 72 hours, room temperature



## Continuous, Pinhole-Free Corrosion Barrier Corrosion Current Measurement



## Uniform, Inert Amorphous Silicon Surface TEM / EDS



## Chemically Pure Coating Layer Laser Ablation ICP-MS

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



Game-Changing Coatings™

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### Resources

Visit [www.SilcoTek.com/learning-center](http://www.SilcoTek.com/learning-center) for literature, data, and more.

### How to Buy

Go to [www.SilcoTek.com/ordering/quote-request](http://www.SilcoTek.com/ordering/quote-request) for a custom quote or [www.SilcoTek.com/buy-coated-products](http://www.SilcoTek.com/buy-coated-products) for stock items.

### Contact SilcoTek

Find a global representative: [www.SilcoTek.com/ordering/international](http://www.SilcoTek.com/ordering/international)

For customer or technical service: [TechService@SilcoTek.com](mailto:TechService@SilcoTek.com)

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