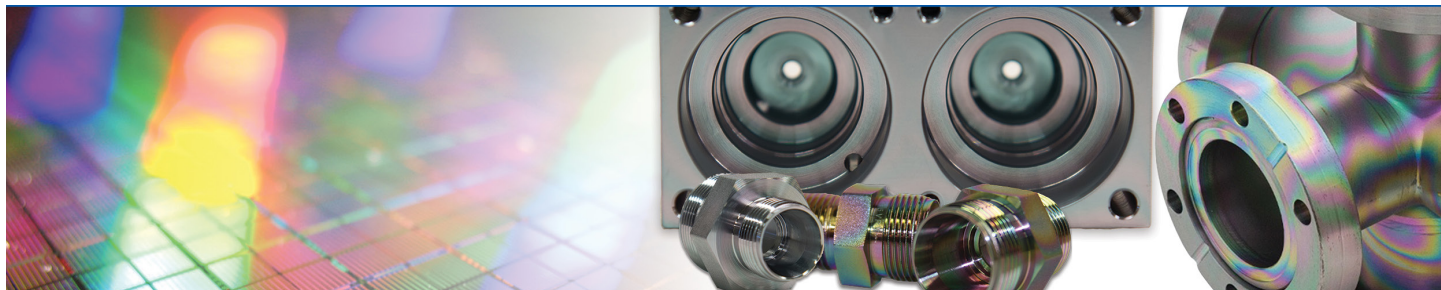


SilcoTek® Silicon CVD Coatings

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

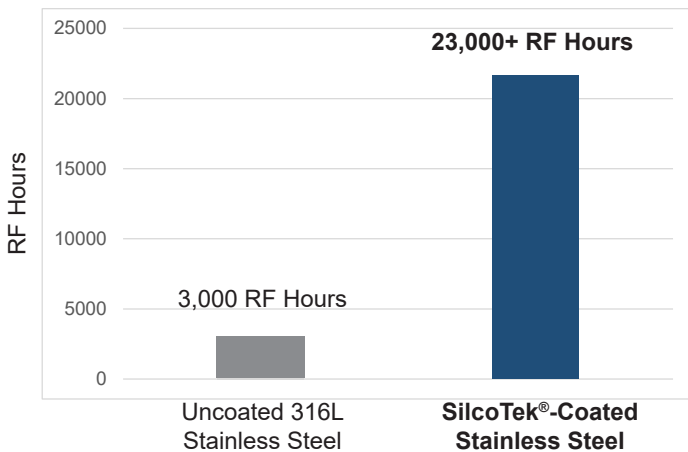
Specifications

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

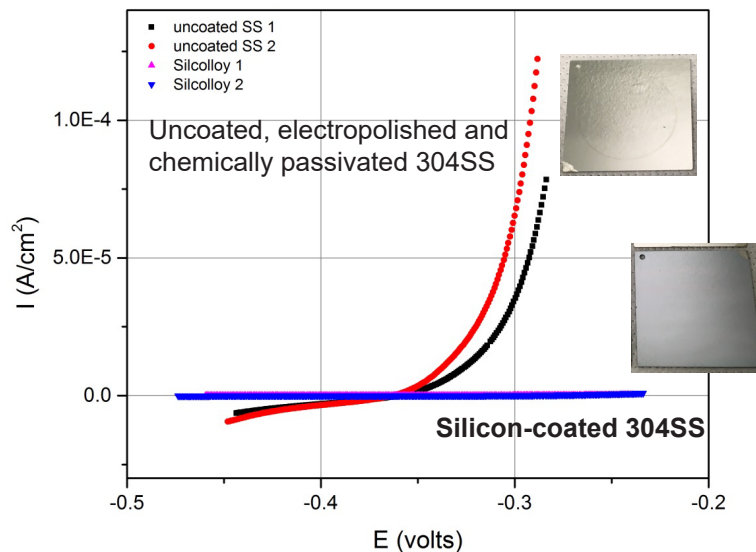
Increased Equipment Uptime

6M HBr for 72 hours, room temperature



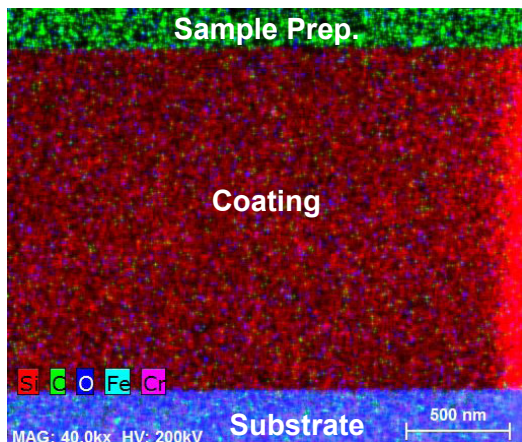
Continuous, Pinhole-Free Corrosion Barrier

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™

www.SilcoTek.com | +1 814-353-1778

Resources

Visit www.SilcoTek.com/learning-center for literature, data, and more.

How to Buy

Go to www.SilcoTek.com/ordering/quote-request for a custom quote or www.SilcoTek.com/buy-coated-products for stock items.

Contact SilcoTek

Find a global representative: www.SilcoTek.com/ordering/international

For customer or technical service: SilcoD@SilcoTek.com

By phone: +1 (814) 353-1778

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