

**Meet the new company  
you've known for  
over 20 years!**

**SilcoTek™**  
Driving Innovation

Restek Performance Coating Division is now  
SilcoTek—an independent company!

During the transition to a 100% employee owned company, Restek's Performance Coatings or "RPC" division became an independent company led by Restek's founder Paul Silvis and members of the Performance Coatings team. The new company, called SilcoTek™, will focus on developing new treatment technologies for the passivation, anticoking, automotive, corrosion, and ultra-high vacuum markets. The new organization will remain a key supplier to Restek and Restek will continue to offer Siltek®, Sulfinert®, and Silcosteel® treated products for chromatography markets.

In 1987, Silcosteel® was invented to serve as an alternative means of making fused silica capillary columns. The technology was further refined from 1987 to 2008 with several patents obtained to protect its unique properties. Restek's MXT capillary columns, Siltek® inlet liners, injection ports, and many other chromatography products utilize Silcosteel® Chemical Vapor Deposition (CVD) technology. The first non-chromatography application was in portable bomb sniffers and instruments designed to detect low levels of explosives in airports and public spaces. Since then the technology has found its way into refining and petrochemical plants, industrial fittings and valves, analytical instrument flow paths, aerospace, and the automotive industry.

As Restek grew, it became apparent that this technology had to be separated into its own business to reach its full potential. Restek is a market driven business that focuses on creating products for the chromatography market. SilcoTek™ is a technology



**1985** Paul Silvis opened Restek for business in one room of an elementary-school-turned-business incubator.



**1987** Restek invents Silcosteel® coating and successfully applies it to instruments for the analytical industry.



**1993** Restek develops an approach for treating both the outside and inside of mass spectrometer components.



**1998** Restek is awarded the first of several patents for surface treatments.



**1999** Silcosteel®-treated air monitoring system components installed in the space shuttle Discovery.



**2002** Restek Performance Coatings develops into its own division of Restek, expanding into a state-of-the-art treatment facility.

driven business that focuses on finding new and unique applications for our surface enhancing technologies. Channel conflicts, internal resource conflicts, and customer perceptions that Restek either competed or was only doing CVD coatings as a sideline business hampered the growth of this product line.

Separating SilcoTek™ into a new business will allow the team to focus on innovative treatment solutions for our chromatography customers and will allow us to offer previously unavailable technologies to new markets with material limitations.

The analytical market will remain a key component of SilcoTek's business. If you have custom parts to treat, please contact SilcoTek™ at 814-353-1778 or go online to SilcoTek.com for more information. You will find the same Plus One customer service at SilcoTek™ that Restek is famous for!



Paul Silvis & The SilcoTek™ Team

Contact us at 814-353-1778  
[www.SilcoTek.com](http://www.SilcoTek.com)



**“SilcoTek's consistent supply of high quality Sulfinert-passivated hardware has been a big factor in the ability of our lab to produce high quality trace analysis data to our international customers. You set the standard for excellence.”**

**Don Pachuta, Ph.D.**  
**President**  
*Airborne Labs International, Inc.*

**“Restek's Performance Coatings group is a world class team and continually goes above and beyond to help make their customers life easier all while supplying a product that is A+++ quality.”**

**Brad Rightnour**  
**Owner**  
*Rightnour Machining Company*



**2003**

SilcoSteel®-AC and SilcoSteel®-CR developed.



**2004**

*R&D* magazine recognizes SilcoSteel®-UHV as one of the 100 most technologically significant products of the year.



**2004**

SilcoSteel®-treated components enter orbit on the Cassini-Huygens Mission to Saturn.



**2006**

SilcoSteel® high-performance automotive coatings awarded 2 “Best New Product” awards at SEMA 2006.



**2009**

SilcoTek is formed. The world's largest provider of silicon CVD treatment services.

# SilcoTek Treatments

SilcoTek can treat a wide variety of materials and substrates

## METALS

- Stainless steel (all grades)
- High carbon steel
- Titanium
- Nickel alloys
- Inconel®
- Hastelloy®
- Frit material
- Metal fiber/matting
- Electropolished and rough surfaces

## GLASS

- Ceramics
- Borosilicate glass
- Silica
- Glass/ceramic media
- Diatomaceous earth

## CARBON



## SilcoNert™

The SilcoNert™ families of inert treatments are used for sampling active compounds and where adsorptive effects or moisture can impact sample integrity. SilcoNert™ is the first and last word in assuring the highest level of sample integrity. The SilcoNert™ family includes:

**SilcoNert™ 1000** (Silcosteel®): A general purpose passivation layer for ferrous and non-ferrous metals, glass, and ceramics.

**SilcoNert™ 2000** (Siltek®/Sulfinert®): The ultimate passivation of treated surfaces, from glass to high nickel alloys of steel. A required treatment for metal components when analyzing for parts-per-billion levels of organo-sulfur compounds & mercury. Greatly reduce moisture contamination and improve system performance with SilcoNert™ 2000.

## SilcoKlean™

Carbon buildup due to coking can reduce sample flow and ruin a sampling system. Extend the life of sampling systems by reducing carbon buildup while improving your sample system performance with SilcoKlean™.

**SilcoKlean™1000** (Silcosteel®-AC): Dramatically reduces carbon buildup on stainless steel components.

## Silcolloy™

The Silcolloy™ is a great way to reduce corrosion while extending the life of your analytical system. Save money, improve analytical system performance and avoid the use of costly high performance alloys with Silcolloy™.

**Silcolloy™ 1000** (Silcosteel®-CR): A corrosion resistant layer that increases the lifetime of system components in acidic environments containing hydrochloric acid, nitric acid, or seawater.

## SilcoGuard™

SilcoGuard™ is designed to minimize outgassing in ultra-high-vacuum (UHV) systems. SilcoGuard™ increases productivity, reduces operating costs and reduces contaminants in UHV systems.

**SilcoGuard™1000** (Silcosteel®-UHV): Greatly reduces outgassing from components in ultra-high-vacuum systems.

*“The coatings have been working perfectly! They have opened up the possibilities of making intricate metal pieces chemically inert to allow us to transport electronically excited gases. In the past, we were limited to using brittle quartz tubes and fittings; now we can use all Silcosteel coated stainless steel parts.”*

Tim Ombrello  
Princeton University



## Industries Served **SilcoTek™ has provided solutions to:**

- **Laboratories**  
save thousands in needless retests caused by high surface activity through the use of SilcoNert™ treated analytical flow paths.
- **Refiners**  
save millions yearly by detecting plant upsets sooner with SilcoTek™ treated sampling systems.
- **Natural gas producers**  
are able to precisely assess feed stock quality with SilcoNert™ sample cylinders.
- **Semiconductor manufacturers**  
eliminate yield-robbing contamination with Silcolloy™ treated process systems.
- **Chemical and petrochemical plants**  
save down time and maintenance costs by reducing corrosion in process systems treated with Silcolloy™.
- **Research & semiconductor operations**  
improve throughput by speeding pump-down rates in vacuum processes, using SilcoGuard™ treatment.
- **NASA**  
has improved analytical instrument durability and sensitivity by treating analytical pathways with SilcoNert™ coating.
- **Power plants**  
nationwide are able to cost effectively detect mandated mercury emissions, using SilcoNert™ treated systems.
- **Chemical process plants**  
improve inertness and corrosion resistance saving thousands.
- **Environmental**  
continuous emissions monitor response is improved by orders of magnitude with SilcoNert™.
- **Alternative energy providers**  
improve corrosion resistance and low level sulfur response.
- **Aerospace**  
suppliers have reduced coking in jet engines with SilcoKlean™

**To learn how SilcoTek™ can meet your process or materials challenge, contact our technical service group at 814-353-1778, or visit us on the web at [www.SilcoTek.com](http://www.SilcoTek.com).**

## Treated Products for Chromatography

SilcoTek™ surface treatments have found many applications worldwide, from analytical laboratories to refineries to semiconductor operations. Makers of scientific instruments have benefited from SilcoTek™ treatments since the mid 1990s, allowing detection of compounds at the parts-per-trillion level. The chromatographer will realize these benefits when treating sample pathways, from injector to detector. Restek offers a full line of coated accessories for the chromatography market. Available from Restek for immediate delivery, some treated chromatographic products include:

- MXT® columns (pages 104-111)
- Inlet liners (see the Instrument Supplies section, beginning on page 134)
- Inlet seals (pages 152-153)
- FID jets (see the Instrument Supplies section, beginning on page 134)
- Injection ports (pages 154-156)
- Tubing and fittings (pages 238-245)
- SilcoCan® air monitoring canisters (pages 370-371)
- Sample cylinders and valves (page 390)
- Sample loops (page 391)

**SilcoTek™ also offers treatments on a custom basis.  
Specialized items in your laboratory can benefit by having an inert surface.**

## How to send parts to SilcoTek™ for treatment.

### Step 1: Get a quote!

We make it easy with quote options to fit your needs. Visit our website [www.SilcoTek.com](http://www.SilcoTek.com) and complete our quote request.

E-mail your quote request to [support@SilcoTek.com](mailto:support@SilcoTek.com)

Fax your quote request to 814-353-1697

Call us! 814-353-1778

**We'll get a quote out to you within 24 hours!**

### Step 2: Send in your parts for custom treatment to SilcoTek™

Follow the mailing instructions included with your quote. Box up your parts and send them to us at 112 Benner Circle, Bellefonte, PA 16823. Your order will be processed in 10 working days or less.

Our treatments maximize the performance of your analytical instrument—giving you accurate analytical results the first time, every time! Saving you thousands in improved yields, better test cycle times and improved system reliability.