Overview

A bio-inert flow path is required to manage the complex and reactive sample profiles that are common in today’s fast-paced analytical world. Modern LC systems feature an array of exotic materials to achieve bio-inertness, but they are significantly more expensive than instruments constructed with stainless steel flow path components.

Dursan® is a coating for stainless steel that provides equal or better bio-inertness than PEEK along with the durability of titanium. Dursan® is a simple and cost-effective solution for parts requiring bio-inert properties throughout the lab.

Key Features

- Creates an iron-free bio-inert flow path to minimize unwanted protein interactions and maximize uptime
- Increases system robustness under extreme salt and pH conditions
- Improves bio-inertness of frits and other difficult components that cannot be treated by other methods
- Enhances chemical compatibility, even with media like tetrahydrofuran (THF) that challenge PEEK

Dursan® Specifications

<table>
<thead>
<tr>
<th>Coating structure:</th>
<th>Functionalized silica-like coating (a-SiOx:CHy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposition process:</td>
<td>Thermal chemical vapor deposition (not plasma-enhanced)</td>
</tr>
<tr>
<td>Temperature:</td>
<td>Deposition: 300° - 450°C, Use: -210°C to 450°C</td>
</tr>
<tr>
<td>Substrate:</td>
<td>Compatibility: Stainless steel, titanium, aluminum, more</td>
</tr>
<tr>
<td></td>
<td>Size: Up to 80&quot; (203 cm), Geometry: Any shape, including complex geometries</td>
</tr>
<tr>
<td>Coating thickness:</td>
<td>400-1600 nm</td>
</tr>
<tr>
<td>Allowable pH exposure:</td>
<td>0-14</td>
</tr>
<tr>
<td>Ideal for:</td>
<td>Frits, columns, end fittings, pump heads, valves, tubing, vessels, and more</td>
</tr>
</tbody>
</table>

“*The Dursan®-coated columns have so far passed all tests bravely...The results were, as expected, much better than steel columns, but also better than pure PEEK columns.*”

Dursan® is patented by and a registered trademark of SilcoTek® Corporation.
Performance Data & Benefits

Improve Peak Shape
Increase chromatographic accuracy and reliability.

50 ppm Tetracycline

C18 Column
2.1mm x 150mm x 5µm

Mobile Phase
50 H₂O:50 MeOH
0.4 mL/min

Dursan®-Coated
Uncoated

More Durable than Fluoropolymers
Improve component lifetime in addition to non-stick properties.

SilcoTek®-coated parts (top) withstand medical-grade cleaning procedures, while fluoropolymers (bottom) crack and flake.

Increase Corrosion Resistance
Extend system lifetime and reduce costs.

ASTM G31 Protocol
20% HCl acid exposure
24 hours at room temp.

Reduces Surface Fouling from Biomedia
Increase time between maintenance cycles.

Resources

How to Buy

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

Patents and Trademarks
SilcoTek® patents and trademarks are the property of SilcoTek Corporation (see http://www.silcotek.com/company-patents-trademarks). The SilcoTek® registered trademarks used here are registered in the USA and may also be registered in other countries. Information subject to change without notice.

© SilcoTek Corporation. All rights reserved. Printed in the USA.