

Protect Sample Integrity and Prolong Sampling System Lifetime

Using Hydroguard™ Deactivated/Silcosteel® Treated Tubing

By Gary Barone, Restek Performance Coatings Division

- Prevents adsorption of sample components to an active surface.
- Long-lasting water resistance, increases instrument up-time.
- Specifically designed and tested for deactivating purge and trap or headspace systems.

Current regulations for drinking water and waste water require quantifying contaminant component concentrations at parts-per-trillion levels. As the demands of analytical methods and the sensitivity of analytical instruments advance, so has the need for improved inertness of the components of the sample pathway. In analyses at parts-per-trillion concentrations, any surface activity in the transfer system can adsorb significant amounts of active analytes and greatly impact the reliability of the data. Furthermore, components of purge and trap or headspace systems often are in contact with steam, which can create activity very quickly—even in coated system components. To address this need, we have created a superior surface for the tubing in purge and trap or headspace systems: Hydroguard™ deactivated/Silcosteel® treated stainless steel tubing.

For more than a decade, Restek's proprietary Silcosteel® and Siltek®/Sulfinert® treatments† have been ideal solutions for creating inert stainless steel pathways. Now, we have developed and rigorously tested Hydroguard™ deactivated/Silcosteel® treated stainless steel tubing specifically to meet the demanding requirements and environments of purge and trap and headspace systems.

Hydroguard™ deactivated/Silcosteel® treated tubing is preferred for situations in which water vaporization is encountered, as in purge and trap systems. Unique deactivation chemistry creates a high-density surface that is not readily attacked by hydrolysis. High-density Hydroguard™ deactivation at the outer surface effectively prevents water vapor from contacting the Silcosteel® treated stainless steel surface below. Thus, an inert surface is maintained in the face of highly aggressive conditions, and active analytes pass through the tubing without adsorbing to the surface.

Regardless of your application, we highly recommend Hydroguard™ deactivated/Silcosteel® treated tubing to improve analytical reliability from your purge and trap or headspace system.

† United States patents 6,511,760 (Silcosteel®) and 6,444,326 (Siltek®/Sulfinert®).

Silcosteel® Treated Hydroguard™ Deactivated Electropolished 316L Grade Stainless Steel Tubing

ID	OD	cat.#	5-24 ft.	25-99 ft.	100-299 ft.	> 300 ft.
0.085" (2.16mm)	1/8" (3.18mm)*	22489				
0.180" (4.57mm)	1/4" (6.35mm)**	22488				

Silcosteel® Treated Hydroguard™ Deactivated Seamless 316L Grade Stainless Steel Tubing

ID	OD	cat.#	5-24 ft.	25-199 ft.	200-399 ft.	> 400 ft.
0.055" (1.40mm)	1/8" (3.18mm)**	22491				
0.180" (4.57mm)	1/4" (6.35mm)**	22490				

Silcosteel® Treated Hydroguard™ Deactivated 304 Grade Stainless Steel Tubing

ID	OD	cat.#	5-24 ft.	25-199 ft.	200-399 ft.	> 400 ft.
0.010" (0.25mm)	1/16" (1.59mm)	22497				
0.020" (0.51mm)	1/16" (1.59mm)	22496				
0.030" (0.76mm)	1/16" (1.59mm)	22495				
0.040" (1.02mm)	1/16" (1.59mm)	22494				
0.085" (2.16mm)	1/8" (3.18mm)*	22493				
0.210" (5.33mm)	1/4" (6.35mm)*	22492				

*0.020" wall thickness

**0.035" wall thickness



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