Sulfinert®-Treated Sample Cylinders

Increase Storage Time for Active Sulfur Compounds

By Neil Mosesman, Air Monitoring Product Marketing Manager

Stainless steel sample cylinders commonly are used in the collection and analysis of refinery and natural gas samples. These samples often contain trace amounts of sulfur-containing compounds (e.g., hydrogen sulfide, mercaptans, and sulfides) which can interfere with reactions or poison catalysts in petrochemical processes. Because sulfur compounds quickly react with stainless steel surfaces, accurate determination of these compounds is impossible when using untreated sample cylinders.

Restek's proprietary Sulfinert® passivation technique bonds an inert silica layer into the surface of the stainless steel, preventing active compounds from reacting with or adsorbing to the stainless steel. Therefore, Sulfinert® products are ideal for storing and transferring reactive sulfur compounds.

Most stainless steel system components, including valves, sample loops, and tubing, can be treated with Sulfinert® passivation (e.g., see page 5). Because the Sulfinert® layer is incorporated into the structure of the stainless steel, treated surfaces can be bent or flexed without affecting their inertness characteristics.

As shown in Figure 1, Sulfinert®-treated cylinders and accessories are inert to reactive sulfur compounds. Hydrogen sulfide exhibited greater than 85% recovery over the test period; methyl mercaptan, ethyl mercaptan, carbonyl sulfide, and dimethyl disulfide exhibited greater than 90% recovery.

Sulfinert®-treated gas sampling equipment is ideal for collecting and storing samples containing ppb levels of sulfur compounds, such as natural gas or beverage-grade carbon dioxide. Sulfinert® treatment ensures that sulfur compounds or other highly active compounds remain stable during transport from the field to the laboratory.

Sulfinert®-Treated Swagelok® Sample Cylinders

- Stable storage of samples containing ppb levels of sulfur compounds.
- D.O.T. rated to 1800psi at room temperature.
- High quality cylinders manufactured by Swagelok®.

Size	qty.	cat.#
75cc	ea.	24130
150cc	ea.	24131
300cc	ea.	24132
500cc	ea.	24133
1000cc	ea.	24134
2250cc	ea.	21394

Sulfinert®-Treated Alta-Robbins Sample Cylinder Valves

- All wetted parts are Sulfinert®-treated for inertness.
- Compatible with Sulfinert®-treated Swagelok® sample cylinders.
- Large, durable, Kel-F® seat ensures leak-free operation.

Description	qty.	cat.#
1/4" NPT Exit	ea.	21400
1/4" Compression Exit	ea.	21401
1/4" NPT with Dip Tube*	ea.	21402
1/4" NPT with 2850psi Rupture Disk	ea.	21403

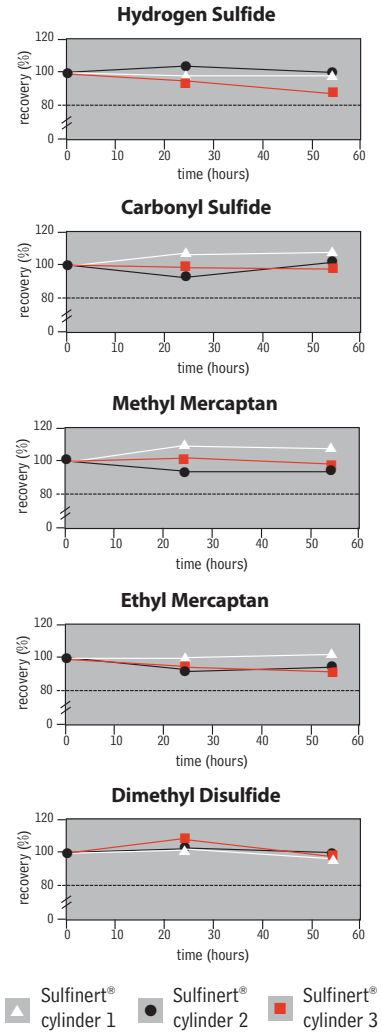
*Specify dip tube length or % outage when ordering (maximum length = 5.25"/ 13.3cm)

Sulfinert®-Treated Rupture Disc Tee

850psig rating; 1/4" NPT connections.

Description	qty.	cat.#
Sulfinert®-Treated Rupture Disc Tee (1/4" NPT connections)	ea.	21396
Replacement Rupture Disc (not Sulfinert®-treated)	ea.	24298

Figure 1 Stability of sulfur compounds is remarkable in Sulfinert®-treated cylinders.



restek **innovation**!

Sulfinert® treated sampling apparatus.

Sample Cylinder (cat. # 24133)

Cylinder Valve (cat. # 21400)

Rupture Disc Tee (cat. # 21396)

For Sulfinert® treated fittings, tubing, and sample loops, refer to our catalog or visit our website.