Inert Silicon Coated Products

FITOK

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Introduction

Oil & gas, petrochemical, chemical, and analytical industries frequently involve diverse active chemical compounds, such as sulfur compounds (especially H_2S), mercury, and ammonia. While stainless steel is widely used in analytical sampling systems for its corrosion resistance, its tendency to adsorb these compounds hinders accurate determination when used untreated. The Inert silicon coating is an effective solution. It provides a chemically protective barrier of amorphous silicon on the surface of the stainless steel, preventing adsorption of active chemical compounds and enabling low detection limits for trace-level analysis. Typical applications include analytical process, environment detection, downhole sampling from petroleum and natural gas wells, as well as monitoring and control of oil refining and petroleum processes.

FITOK uses top notch inert silicon coating techniques including SilcoNert® 2000① to coat our products. The coated product's maximum working pressure and temperature remain unchanged in typical applications mentioned.

Note：① SilcoNert® 2000 (Sulfinert®) is registered trademark of SilcoTek Corporation.

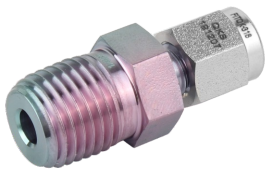
Features

◎ Coating by chemical vapor deposition (CVD) process
◎ Typical thickness: 100-500 nm
◎ Enables ppb-level trace analysis of active compounds
◎ Accommodate any shapes, include complex geometries
◎ Durable with long service life

Typical Inert Silicon Coated Products

6D series tube fittings

◎ Only the body is inert silicon coated
◎ Silver plated nut to reduce the friction and avoid galling
◎ Easy connection and disconnection
◎ Minimum 25 times reassembly
◎ Various configurations available



ND series needle valves

◎ All wetted metallic components are inert silicon coated
◎ Maximum working pressure up to 3,000 psig (207 bar)
◎ Various stem tip and O-ring materials are optional
◎ Threadless and nonrotating stem for contamination free and reliable sealing
◎ Compact size and light-weighted

BO series ball valves

- All wetted metallic components are inert silicon coated
- Maximum working pressure up to 3,000 psig (207 bar)
- Good integrity with one-piece body and ball stem
- No dead space for better purity
- Top-loaded design for easy maintenance
- Various flow path and end connections are available
- Pneumatic or electric actuator available

QC series quick connects

- All wetted metallic components are inert silicon coated
- Maximum working pressure up to 3,000 psig (207 bar)
- Single-end shutoff, double-end shutoff and full-flow quick-connects available
- Push-to-connect coupling for quick and easy operation
- Sturdy locking mechanism with large contact area to ensure reliable connection

TMP and TCT series tubing

- Internal surfaces of the tubing is inert silicon coated
- Polished external surface to ensure reliable seal
- Match with inert silicon coated tube fittings
- Straight and coiled tubing are optional

Sample cylinders

- External and Internal surfaces are inert silicon coated
- Single-ended and double-ended cylinders are available
- Standard end connection: 1/4 female NPT
- TPED/DOT certified sample cylinders are optional

Other products with Inert Silicon coating are also available upon request.

Ordering Information

If you need to order Inert Silicon coated products, please add "-SI" as a suffix to the standard ordering number.
For example, if the standard ordering number of sample cylinder is 6L-SC18-DN4-300, then the ordering number of Inert Silicon coated sample cylinder should be 6L-SC18-DN4-300-SI.

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