

SILCONERT® 2000 COATED TUBING



PAC Stainless is a premier stocking source of stainless steel tubing treated with SilcoNert® 2000 from SilcoTek®, the pioneer of chemically inert coating technology. Industry leaders in petrochemical, oil, gas, and power generation rely on SilcoNert® coated tubing to increase the reliability, accuracy, and speed of their process analyzers—especially when dealing with challenging chemical compounds like sulfur, mercury, NOX, and more. SilcoNert® coated stainless steel tubing is a necessity for keeping critical processes running and meeting strict environmental monitoring requirements.

WHAT IS SILCONERT® 2000?

SilcoNert® is a brand of proprietary amorphous silicon coatings from SilcoTek®. SilcoNert® 2000 – also commonly referred to as Sulfinert®—is the most inert version of the coating that is available. While uncoated stainless steel tubing adsorbs reactive chemical compounds before they can reach the analyzer's detector (thus providing inaccurate readings), SilcoNert® 2000 enables chemical analysis down to parts-per-trillion levels by shielding the stainless steel tubing from chemical adsorption.

SilcoTek coatings are applied with an innovative chemical vapor deposition (CVD) process. CVD is performed in the gas phase at high temperatures, so even 1/16" OD and smaller tube sizes are uniformly coated to create an inert barrier throughout the interior surface.

WHY USE SILCONERT® COATED TUBING?

Stainless steel is versatile, but if left untreated, it will cause problems in applications where sensitive chemistry makes the difference between profitability or plant shutdown. Tubing accounts for a majority of the surface area in any process system, so it's critical that it performs at its peak. SilcoNert® coated stainless steel tubing from PAC Stainless should be specified when dealing with chemical compounds known to be reactive to untreated stainless steel.

PRODUCT SPECIFICATIONS

ASTM A269, ASTM A213/ ASME SA213 (SEAMLESS)

CHEMICAL REQUIREMENTS

T316/L (UNS S31600/UNS S31603)
COMPOSITION %

| ELEMENTS | | UNS S31600 | UNS S31603 |
|----------|-------------|------------|------------|
| C | Carbon | 0.08 max | 0.030 max |
| Mn | Manganese | 2.00 max | 2.00 max |
| P | Phosphorous | 0.045 max | 0.045 max |
| S | Sulfur | 0.030 max | 0.030 max |
| Si | Silicon | 1.00 max | 1.00 max |
| Cr | Chromium | 16.0–18.0 | 16.0–18.0 |
| Ni | Nickel | 10.0–14.0 | 10.0–15.0 |
| Mo | Molybdenum | 2.00–3.00 | 2.00–3.00 |

SIZE OPTIONS

Other sizes are available upon request.

STICK TUBING - 80" LENGTHS (INTERNAL & EXTERNAL COAT)

| OD | WALL |
|-------|-------|
| .125" | .020" |
| .125" | .028" |
| .250" | .035" |
| .250" | .049" |
| .375" | .035" |
| .500" | .035" |

COILED TUBING (INTERNAL COAT ONLY)

| OD | WALL |
|-------|-------|
| .063" | .020" |
| .125" | .020" |
| .125" | .035" |
| .250" | .035" |
| .375" | .035" |
| .500" | .035" |

COATING OPTIONS

SILCONERT® 2000

| Spec | Description |
|---|---|
| Composition | Functionalized hydrogenated amorphous silicon |
| Deposition Process | Thermal chemical vapor deposition |
| Max Temperature | 450° C |
| Typical Thickness | 100–500 nanometers |
| Hydrophobicity <i>Water Contact Angle</i> | > 65° |
| Allowable pH Exposure | 0–8 |

*All Stock is manufactured domestically and DFARS compliant.