

Very High Temperature Sleevings

Nextel® Ceramic or 96% Silica



Nextel 312 is an Alumina-Borica-Silica fiber that is braided without the aid of organic, glass or metal inserts. This sleeving retains strength and flexibility at continuous exposure to 1200°C (2200°F). Short exposures to 1425°C (2600°F) can be tolerated. Most common metals (except molten copper and tin) do not attack the fibers.

Because Nextel 312 Ceramic Fibers contain no residual acids or chlorides, there are no chemicals present to corrode or etch the wires. Even in a test involving exposure to 96 percent relative humidity, no noticeable electrolytic corrosion was detected.

Not recommended for use in abrasive environments without the protection of Inconel® overbraiding or a thermowell.



1200°C (2200°F)
Continuous
Exposure Braided
Ceramic Sleevings.

- ✓ Six Sizes
- ✓ 1.5, 3.0, 4.5, 6.0, 9.0, 12 mm (1/16, 1/8, 3/16, 1/4, 3/8, 1/2") Diameter Thermocouple Wire Insulation
- ✓ Low Thermal Conductivity
- ✓ Dimensionally Stable
- ✓ Non-Hygroscopic
- ✓ Maintains Strength at Higher Temperatures

Effects of Chemicals on XC Sleevings

| Chemical | Percent Strength Retention* |
|--|-----------------------------|
| NH ₄ OH (ammonium hydroxide) | 78 |
| HCl (hydrochloric acid) | 85 |
| H ₂ SO ₄ (sulfuric acid) | 38 |
| H ₃ PO ₄ (phosphoric acid) | less than 1 |
| NaOH (sodium hydroxide) | less than 1 |
| KOH (potassium hydroxide) | less than 1 |
| CaO (calcium oxide-lime) | 48 |

* After exposure to 10 percent chemical baths.

This material is intended for industrial applications only. In addition, OMEGA does not recommend this material for food, cosmetic, medical, or pharmaceutical use.

To Order Visit omega.com/xc_xc4_sleevings for Pricing and Details

| Nextel 312 | Nextel 440 | Dimensions: mm (inch) | | | | |
|------------|------------|-----------------------|----------------|----------|-----------------|-----------|
| Model No. | Model No. | Nom. ID | Wall Thickness | Cov.** % | Picks/ per inch | Yards/ lb |
| XC-116 | XC4-116 | 1.5 (1/16) | 0.74 (0.029) | 92 | 13 | 85 |
| XC-18 | XC4-18 | 3.0 (1/8) | 0.81 (0.032) | 83 | 13 | 36 |
| XC-316 | XC4-316 | 4.5 (3/16) | 0.89 (0.035) | 91 | 11 | 27 |
| XC-14 | XC4-14 | 6.0 (1/4) | 0.92 (0.036) | 81 | 12 | 25 |
| XC-38 | XC4-38 | 9.0 (3/8) | 0.94 (0.037) | 72 | 10 | 17 |
| XC-12 | XC4-12 | 12 (1/2) | 1.1 (0.045) | 71 | 11 | 12 |

| Silica | Dimensions: mm (inch) | |
|-----------|-------------------------|----------------|
| Model No. | Nominal Inside Diameter | Wall Thickness |
| XS-116 | 1.5 (1/16) | 0.71 (0.028) |
| XS-18 | 3.0 (1/8) | 0.89 (0.035) |
| XS-316 | 4.5 (3/16) | 0.89 (0.035) |
| XS-14 | 6.0 (1/4) | 0.89 (0.035) |
| XS-38 | 9.0 (3/8) | 0.89 (0.035) |
| XS-12 | 12 (1/2) | 0.89 (0.035) |

Silica Insulation Available

Nextel 312

- ✓ 1200°C (2200°F) Continuous Rating
 - ✓ 1425°C (2600°F) Short Term Rating
- ### Nextel 440
- ✓ 1375°C (2500°F) Continuous Rating
 - ✓ 1550°C (2800°F) Short Term Rating
- ### Silica (96% SiO₂)
- ✓ 982°C (1800°F) Continuous Rating

Silica is chemically compatible in many environments such as air, oxygen, nitrogen, argon, ammonia, carbon monoxide, chlorine, hydrogen chloride and sulfur dioxide. It is also stable in a vacuum, in contact with water, various hydrocarbons, ammonium hydroxide, and hydrochloric, nitric, and sulfuric acids.

Stocked in 10, 25, 50 and 100' lengths.

** % coverage is the sleeve length when it is expanded to the nominal inside diameter as compared to the relaxed length. (Measured length x % coverage = actual length covered.) **Note:** The length is measured when the sleeving is empty and in a relaxed state.

Ordering Example: XC-14-25, 25' of 1/4" Nextel 312 insulation, 1200°C (2200°F) continuous temperature rating.

Note: Published price is based on market value at time of printing and is subject to change due to fluctuations in value of raw material.