

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). 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.



- ✓ **Six Sizes**
- ✓ **1.5, 3.0, 4.5, 6.0, 9.0, 12 mm**
($\frac{1}{16}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ ") **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

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 ($\frac{1}{16}$)	0.74 (0.029)	92	13	85
XC-18	XC4-18	3.0 ($\frac{1}{8}$)	0.81 (0.032)	83	13	36
XC-316	XC4-316	4.5 ($\frac{3}{16}$)	0.89 (0.035)	91	11	27
XC-14	XC4-14	6.0 ($\frac{1}{4}$)	0.92 (0.036)	81	12	25
XC-38	XC4-38	9.0 ($\frac{3}{8}$)	0.94 (0.037)	72	10	17
XC-12	XC4-12	12 ($\frac{1}{2}$)	1.1 (0.045)	71	11	12
Silica		Dimensions: mm (inch)				
Model No.		Nominal Inside Diameter	Wall Thickness			
XS-116		1.5 ($\frac{1}{16}$)	0.71 (0.028)	Silica Insulation Available		
XS-18		3.0 ($\frac{1}{8}$)	0.89 (0.035)			
XS-316		4.5 ($\frac{3}{16}$)	0.89 (0.035)			
XS-14		6.0 ($\frac{1}{4}$)	0.89 (0.035)			
XS-38		9.0 ($\frac{3}{8}$)	0.89 (0.035)			
XS-12		12 ($\frac{1}{2}$)	0.89 (0.035)			

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 $\frac{1}{4}$ " Nextel 312 insulation, 1200 °C (2200 °F) 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.

Nextel 312

✓ 1200 °C (2200 °F)

Nextel 440

✓ 1300 °C (2372 °F)

Silica (96% SiO₂)

✓ 982 °C (1800 °F)

Continuous Rating

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.

