

# Ceramic Fiber Bulk & Chopped



NUTEC Fibratec\* bulk and chopped is produced by the fusion of high purity alumina/silica raw materials in an advanced electric arc furnace. The fibers produced are exceptionally clean and consistent in quality and texture.

NUTEC Fibratec\* bulk and chopped fibers are loose, long and flexible with high refractory properties, and are produced by the "blown" and the "spun" processes. They are used as the base for the production of moldable, and vacuum formed board and shapes.

Textile bulk is the ideal solution for applications requiring a low shot content fiber. The fiber was developed for the manufacture of high temperature ropes and cloth. However it is now used in the manufacture of vacuum formed shapes and felt products. Textile bulk contains a lubricant.

#### Features

- > Low thermal conductivity.
- > Low heat storage.
- > Excellent thermal shock resistance.

- > Use limit to 1482 °C (2700 °F)
- > Low sound transmission.
- > Contains no asbestos.

#### Typical Applications

- > Packing expansion joints in high temperature furnaces.
- > Low mass kiln cars.
- > Vacuum formed and moldable products.

### Ceramic Fiber Bulk

Typical Physical Properties	LTS	HPL	HPS	HTZ	RT	HT
Max. Use Limit, °C (°F)	1000 (1800)	1260 (2300)	1315 (2400)	1425 (2600)	1260 (2300)	1482 (2600)
Continuous Use Limit, °C (°F)	900 (1652)	1160 (2120)	1200 (2192)	1325 (2417)	1160 (2120)	1380 (2516)
Melting Point, °C (°F)	1760 (3200)	1760 (3200)	1760 (3200)	1815 (3300)	1760 (3200)	1760 (3200)
Fiber Diameter, microns	3.0	3.0	3.0	3.0	2.5	2.5
Fiber Length, mm (in)	203 (8)	203 (8)	203 (8)	203 (8)	178 (7)	178 (7)
Chemical Analysis (%)						
AL2O3	42 - 46	45 - 46	44 - 50	33 - 37	46 - 48	52 - 54
SiO2	50 - 60	51 - 52	50 - 56	47 - 51	49 - 55	42 - 46
ZrO2	-	-	-	13 - 19	-	-
Fe2O3	0.7 - 1.5	0.1 - 0.2	0.1 - 0.2	0.1 - 0.2	0.8 - 1.2	0.1 - 0.2
TiO2	1.5 - 1.9	0.1 - 0.2	0.1 - 0.2	0.1 - 0.2	1.5 - 1.9	0.1 - 0.2

## 1260 Textile Grade Bulk Fiber

Typical Physical Properties	1260 HPT Bulk	1260 HPT Chopped
Color	White	White
Classification Temp, °C (°F)	1260 (2300)	1260 (2300)
Continuous Use Limit, °C (°F)	1160 (2120)	1160 (2120)
Melting Point, °C (°F)	1760 (3200)	1760 (3200)
Shot Content, (Diameter<0.25mm)	<10%	<10%
Filament Diameter, microns	3 - 5	3 - 5
<b>Chemical Analysis (%)</b>		
AL <sub>2</sub> O <sub>3</sub>	45 - 46	45 - 46
SiO <sub>2</sub>	51 - 52	51 - 52
<b>Thermal Conductivity, W/moK (BTU-in/hr-ft<sup>2</sup>-oF)</b>		
<b>Mean Temperature, 128kg/m<sup>3</sup> (8 lb/ft<sup>3</sup>)</b>		
@ 500 °F	0.06(0.42)	0.06(0.42)
@ 1000 °F	0.12(0.82)	0.12(0.82)
@ 1500 °F	0.19(1.32)	0.19(1.32)
@ 1800 °F	0.24(1.67)	0.24(1.67)
@ 2000 °F	0.28(1.92)	0.28(1.92)
<b>Mean Temperature, 96kg/m<sup>3</sup> (6 lb/ft<sup>3</sup>)</b>		
@ 500 °F	0.07(0.48)	0.07(0.48)
@ 1000 °F	0.14(0.97)	0.14(0.97)
@ 1500 °F	0.23(1.57)	0.23(1.57)
@ 1800 °F	0.29(1.98)	0.29(1.98)
@ 2000 kF	0.33(2.27)	0.33(2.27)

### \* Spun Fibers

Available in lubricated and non lubricated fibers