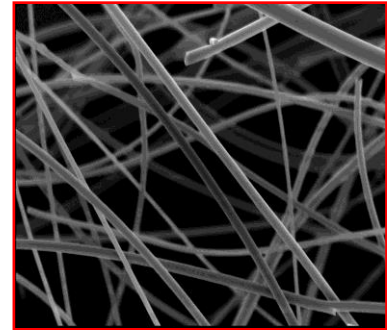


## ALTRA®

### Polycrystalline Alumina Fiber Mat

**ALTRA®** alumina fiber mats are high purity, low shot content polycrystalline materials for refractory insulation applications up to 1650°C (3000°F). **ALTRA®** fibers are manufactured via a sol-gel solution process to control fiber diameter and non-fibrous shot content. Controlled firing yields the optimal crystalline phase for maximum resistance to thermal shrinkage at elevated temperatures. Two grades are available for a broad range of applications:



- ▲ **ALTRA® MAT 72:** mullite composition, superior thermal shrinkage resistance, compressibility and resiliency. Preferred composition for fabrication of modular linings for oxidizing and neutral atmospheres up to 1650°C.
- ▲ **ALTRA® MAT 97:** hi-alumina composition, excellent resistance to reduction at high temperatures in dry hydrogen and vacuum atmospheres. Preferred composition for resistance to chemically induced shrinkage from direct contact with most vapors and solids, including alkalis, acids, and iron oxides.

| Properties  | GRADE  |  |
|---|--|--|
|   | ALTRA® MAT 72                                | ALTRA® MAT 97                                |
| <b>Typical Composition</b>  |  |  |
| Al <sub>2</sub> O <sub>3</sub>  | > 71   | > 96   |
| SiO <sub>2</sub>  | < 28   | < 3.5  |
| Fe <sub>2</sub> O <sub>3</sub>  | < 0.1  | < 0.1  |
| Other oxides  | < 0.2  | < 0.2  |
| <b>Linear Shrinkage % @ 1500°C</b><br>6 lbs/ft <sup>3</sup> Mat         |  |  |
| 24 hrs  | 0.8  | 3.9  |
| 48 hrs  | 1.1  | 6.3  |
| 72 hrs  | 1.1  | 6.2  |
| 134 hrs   | 1.2  | 5.9  |
| 192 hrs   | 1.5  | 5.9  |
| <b>Thermal Conductivity(W/mK)</b><br>6 lbs/ft <sup>3</sup> Strip Module |  |  |
| 200°C   | 0.06   | 0.06   |
| 400°C   | 0.09   | 0.10   |
| 600°C   | 0.13   | 0.16   |
| 800°C   | 0.19   | 0.25   |
| 1000°C  | 0.28   | 0.39   |
| 1200°C  | 0.41   | 0.62   |
| 1400°C  | 0.61   | 0.97   |
| <b>Shot Content</b><br>> 75 Microns (> .003")                           | < 1%   | < 1%   |
| <b>Availability</b>   |  |  |
| Density(lbs/ft <sup>3</sup> )   | 3, 5 and 6                                   | 3.5, 5 and 6                                 |
| Roll Size   | 24" wide x 283" long (47.2 ft <sup>2</sup> ) | 24" wide x 283" long (47.2 ft <sup>2</sup> ) |
| Thickness   | ½" and 1"                                    | ½" and 1"                                    |

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.