

**PRODUCT DATA****ALTRA<sup>®</sup> COMBI Fiber Modules**  
*Economical Linings for Firing to 2850 °F*

**ALTRA<sup>®</sup>** COMBI fiber modules are designed for application temperatures up to 2850°F. **ALTRA<sup>®</sup>** polycrystalline fibers are used on the hot face of the module and offer significantly reduced thermal shrinkage compared to refractory ceramic fibers. The reduced shrinkage makes it possible to use **ALTRA<sup>®</sup>** modules at much higher temperatures than ceramic fiber modules. The polycrystalline structure of the **ALTRA<sup>®</sup>** fibers also prevents the generation of cristobalite.



**ALTRA<sup>®</sup>** modules are available in various fiber grades appropriate for oxidizing or reducing atmospheres. They are suitable for lining kilns and furnaces for sintering or firing technical ceramics, electronic ceramics, ferrites, powder metal parts, carbon fibers and other products requiring firing temperatures > 1300°C. Traditionally insulating brick linings are used in these types of kilns and furnaces. **ALTRA<sup>®</sup>** modules allow more rapid heating and cooling than brick linings, thus reducing cycle time and increasing kiln through-put. **ALTRA<sup>®</sup>** modules are not damaged by thermal shock and so can offer longer life and reduced maintenance versus brick linings in applications with rapid thermal cycling conditions.

**GRADES**

ALTRA 72 – for application temperatures up to 3000°F in oxidizing and neutral atmospheres

ALTRA 97 – for reducing atmosphere applications, such as dry hydrogen and vacuum, to 2750°F

**Densities**

6 to 10 lbs/ft<sup>3</sup>

**Sizes**

All sizes and thicknesses

**Anchors**

RA-25, one shot, Rath designed comb anchors Type SKA50

**Options**

Available unmounted or mounted on Steel Panels or expanded metal

Hardboard or galvanized steel Compression plates