

## DELTA HM™ / 3000°F HYBRID MODULE

**Delta HM™ / 3000°F Modules** have the highest insulating value achievable in a ceramic fiber lining. Each module is comprised of folded stacked edge grain blanket under compression to insure a tight seal and a “spring-back” action not found in typical wallpaper linings.

Noted features of a **Delta HM™ / 3000°F Modules** lining are:

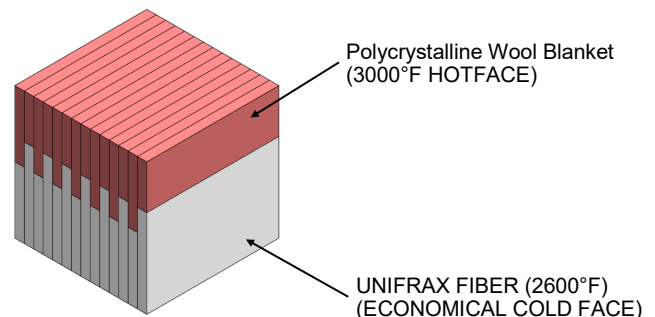
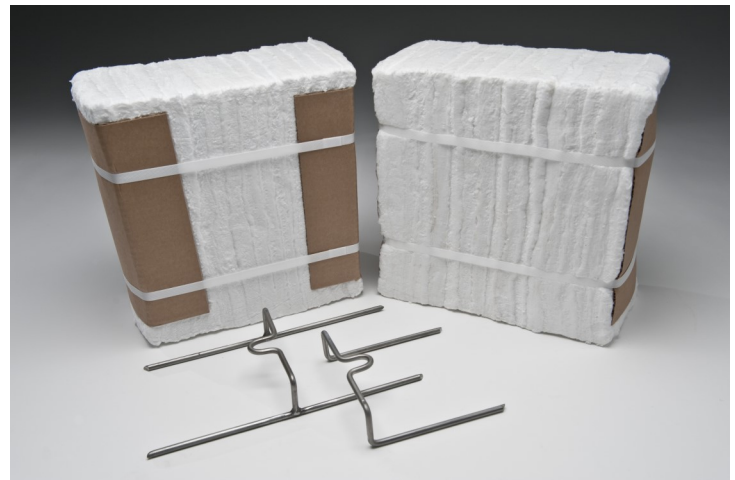
- Fast & Easy installation
- Low heat storage and fuel costs
- Self-Supporting internal hardware reduces structural steelwork vs. castable or brick linings.
- Bolt-On and Bolt-Thru attachment methods provide versatility for retro-fits & rebuilds especially in tight areas.
- Thermal shock resistance speeds up heat ups and cool downs for quick turn-around times.
- Industry-leading heavy gauge hardware reduces the chance of channel tear-through during torque down.
- Manufactured in the USA with Unifrax Blanket & Polycrystalline Wool Blanket

Typical Applications for **Delta HM™ / 3000°F Modules** are:

- Stress Relieving Furnaces
- Annealing Furnaces
- Car Bottom & Heat Treating Furnaces
- Process Heaters
- Reheat Furnaces
- Kiln & Boiler Linings
- Incineration Equipment
- Stack Linings
- Soaking Pit Covers
- Ladle Covers & Ladle Preheaters
- Forge Furnaces
- Burner Blocks

Size & Densities Available

- 8 Lbs/Ft<sup>3</sup> / Standard size is 12” x 12” x 12”
- Custom sized, pre-cut modules, & special bolt locations are also available for a seamless installation.
- HM™ / 3000°F Modules are also available in a cut hot face “edge grain” style.
- Full thickness 3000°F modules available.



**DELTA HM™ HYBRID MODULE**

**Corporate Office**

Ph: 281.391.1320 / Toll Free 800.430.2226

Fax: 281.391.2015

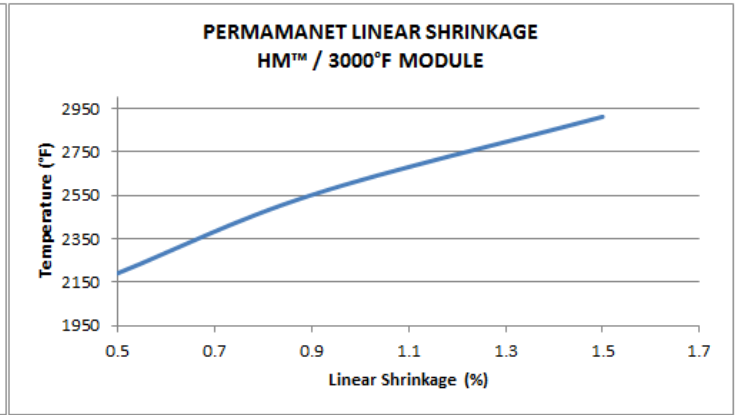
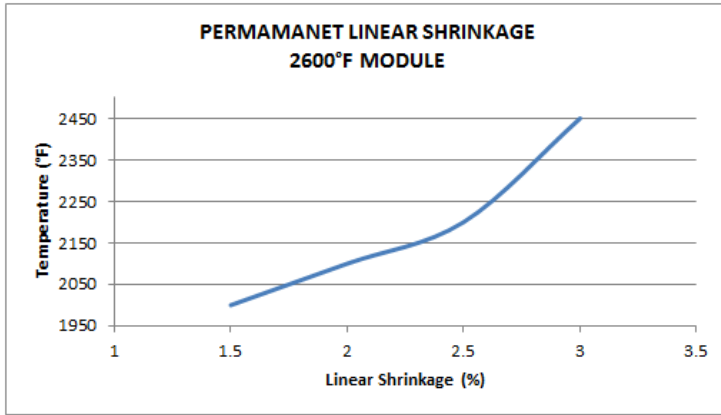
Web: <http://www.deltarefractories.com>

Email: [DRISales@deltarefractories.com](mailto:DRISales@deltarefractories.com)

**Mailing Address**

21557 Provincial Blvd  
Katy, Texas 77450

## DELTA HM™ / 3000°F HYBRID MODULE



### Typical Product Parameters

#### Grade (Recommended Operating Temperature)

Chemical Composition	2600°F (2450°F)	3000°F (2912°F)
Al <sub>2</sub> O <sub>3</sub>	29-31%	80%
SiO <sub>2</sub>	53-55%	19%
ZrO <sub>2</sub>	15-17%	—
Fe <sub>2</sub> O <sub>3</sub>	—	—
TiO <sub>2</sub>	—	—
MgO	—	—
CaO	—	—
Na <sub>2</sub> O <sub>3</sub>	—	—
Alkali	—	—
Leachable Chlorides	< 10 ppm	—
Other Inorganics	—	—
*MgO and other trace elements	—	—

#### Corporate Office

Ph: 281.391.1320 / Toll Free 800.430.2226

Fax: 281.391.2015

Web: <http://www.deltarefractories.com>

Email: [DRISales@deltarefractories.com](mailto:DRISales@deltarefractories.com)

#### Mailing Address

21557 Provincial Blvd  
Katy, Texas 77450

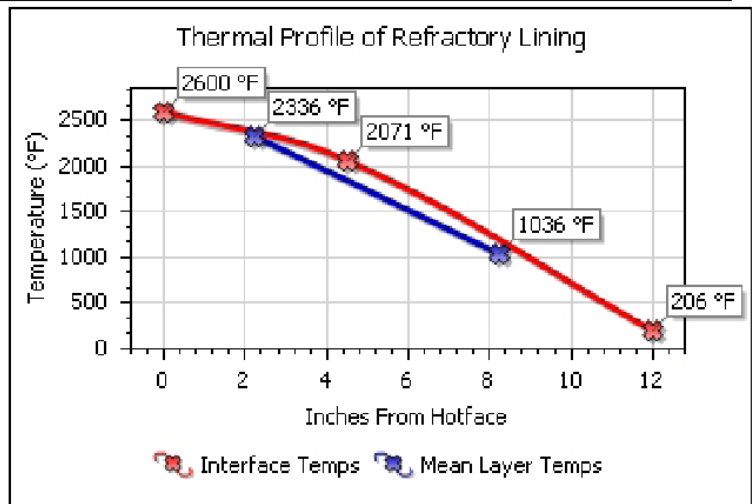
## **DELTA HM™ / 3000°F HYBRID MODULE THERMAL PROFILES**

### Summary

**Max Internal Temp:** 2600°F  
**Cold Face Temp:** 206°F  
**Lining Thickness:** 12"  
**Heat Loss:** 318 BTU/Ft<sup>2</sup>/Hr.  
**Heat Storage:** 3088 BTU/Ft<sup>2</sup>

These are calculated theoretical values and are not necessarily lining recommendations. They do not allow for the influence of metal or ceramic anchors or for the structures outside the shell that may inhibit free heat flow.

Calculations should be verified by qualified personnel before installation.



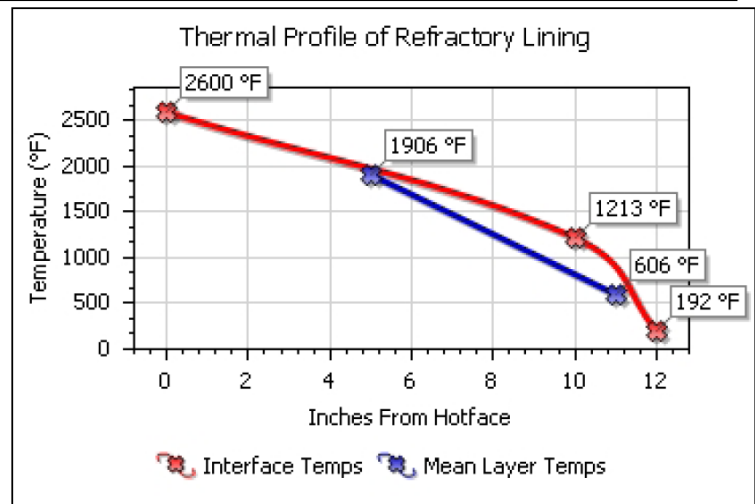
### DELTA 3000°F MODULE THERMAL PROFILE

### Summary

**Max Internal Temp:** 2600°F  
**Cold Face Temp:** 192°F  
**Lining Thickness:** 12"  
**Heat Loss:** 274 BTU/Ft<sup>2</sup>/Hr.  
**Heat Storage:** 2439 BTU/Ft<sup>2</sup>

These are calculated theoretical values and are not necessarily lining recommendations. They do not allow for the influence of metal or ceramic anchors or for the structures outside the shell that may inhibit free heat flow.

Calculations should be verified by qualified personnel before installation.



#### Corporate Office

Ph: 281.391.1320 / Toll Free 800.430.2226

Fax: 281.391.2015

Web: <http://www.deltarefractories.com>

Email: [DRISales@deltarefractories.com](mailto:DRISales@deltarefractories.com)

#### Mailing Address

21557 Provincial Blvd  
Katy, Texas 77450