



### Introduction

**SoliBoard™ High Strength series consists of a range of high temperature boards which are targeted to deliver higher mechanical strength, better machinability and lower loss of green strength after first firing. SoliBoard™ High Strength series can be used for a wide range of application in refractory linings or in domestic appliances.**

Compared to the SoliBoard standard series, the SoliBoard High Strength Series is manufactured using higher percentages of inorganic binders and a more densely nested fiber structure utilizing the same Ultra Low Shot technology utilized throughout our fiber product range. For that reason we can achieve at higher levels of mechanical strength compared to our competitors at even higher densities.

### SoliBoard™ HS X-grade

Is our high strength, general purpose, 2300°F rated, refractory ceramic fiber board. SoliBoard HS X-grade is manufactured from a our SoliBulk X-grade with selected inorganic and organic fillers to deliver high strength, and performance in refractory linings.

### SoliBoard™ HS ZR-grade

Is our highest rated refractory ceramic fiber board from the perspective of strength and a classification temperature of 2600°F.

All Board formulations contain a small amount of organic binder to improve the cold handling strength which burns out on first firing at approximately 400-600°F.

### Type

Boards from high temperature Refractory Ceramic Fiber (RCF) and selected fillers.

### Temperature range

**SoliBoard™ HS X-grade** has a classification temperature of 2300°F.

**SoliBoard™ HS ZR-grade** has a classification temperature of 2600°F.

The maximum continuous use temperature provided on the datasheet is guideline and only applicable in a clean oxidizing atmosphere.

### Typical applications

- Thermal insulation for furnace linings
- High temperature back-up insulation for ladles and torpedo cars
- Tundish and launder covers in the casting of various alloys
- Lining combustion chamber for gas fired boilers and heaters
- General technical insulation of furnaces and technical installations

### Benefits

- Low shot technology
- Excellent insulation performance
- High handling strength
- Resistant to erosion from high gas velocities
- Can be used in direct flame contact
- Low shrinkage
- Excellent thermal stability
- Resistant to thermal shock



| Properties measured                  | Standard   | Unit                          | SoliBoard HS X-grade | SoliBoard HS ZR-grade |
|--------------------------------------|------------|-------------------------------|----------------------|-----------------------|
| Grade                                |            |                               | RCF                  | RCF                   |
| Colour                               |            |                               | White/tan            | White/tan             |
| Classification temperature           |            | °F                            | 2300                 | 2600                  |
| Continuous use temperature           |            | °F                            | 2100                 | 2300                  |
| Density                              |            | PCF                           | 26-30                | 26-30                 |
| Modules of Rupture                   | EN 993-6   |                               |                      |                       |
| Unfired                              |            | PSI                           | ≥ 185                | ≥ 185                 |
| Fired for 24h @ continuous use temp. |            | PSI                           | ≥ 60                 | ≥ 60                  |
| Compressive Strength (unfired)       | EN-ISO8895 |                               |                      |                       |
| @ 5% deformation                     |            | kPa                           | ≥ 60                 | ≥ 60                  |
| @ 10% deformation                    |            | kPa                           | ≥ 75                 | ≥ 75                  |
| Loss on ignition                     | GB/T 6900  | wgt%                          | < 6                  | < 6                   |
| Permanent linear shrinkage           | EN 1094-7  | %                             |                      |                       |
| @2200°F                              |            |                               | < 3                  |                       |
| @2400°F                              |            |                               |                      |                       |
| @2600°F                              |            |                               |                      | < 4                   |
| Thermal conductivity                 | ASTM C201  | BTU·in/hr·ft <sup>2</sup> ·°F |                      |                       |
| @ 500°F                              |            |                               | 0.45                 | 0.51                  |
| @ 1000°F                             |            |                               | 0.71                 | 0.78                  |
| @ 1500°F                             |            |                               | 1.14                 | 1.20                  |
| @ 1800°F                             |            |                               | 1.40                 | 1.47                  |
| @ 2000°F                             |            |                               | 1.63                 | 1.70                  |

### Contact

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### Availability

SoliBoard High Strength is available in a standard size of 47 1/4 x 36 inch which are supplied on carton boxes of approximately 5 inch high (based on the thickness of the board). Please refer to the list below for packaging details of the SoliBoard product range, other sizes are available on request.

| 47 1/4 x 36 inch |                |                   |
|------------------|----------------|-------------------|
| Thickness        | Per carton box | Boards per pallet |
| 3/8              | 12             | 168               |
| 1/2              | 10             | 140               |
| 1                | 8              | 112               |
| 1 1/2            | 6              | 90                |
| 2                | 5              | 70                |

### Product range

SoliBoard High Strength is part of an extensive product range supplied by Vulcor Insulation. Vulcor Insulation is supplying insulation solutions from cryogenic to high temperature applications. All products offered by Vulcor are manufactured in house or sourced from exclusive trusted 3<sup>rd</sup> party partners.

### Technical support

Vulcor Insulation provides specifiers and customers with guidance on all aspects of the materials selection for their application, the installation and compliance with relevant regulations and performance standards.

For additional information about product performance or to identify the recommended product for your application, please contact the team at Vulcor Insulation.