

Data Sheet

ArmorWool™ Standard Grade Boards

a product of ArmorMax Engineered Systems

Introduction

ArmorWool Standard Grade Board products consist of 3 Refractory Ceramic Fiber (RCF) Boards: ArmorWool X, ArmorWool HP, and ArmorWool ZR. Manufactured using Ultra Low Shot (ULS) technology bulk fibers, the state-of-the-art manufacturing techniques deliver a continuous manufactured board to a thickness of 4 inches at high consistency, quality, and performance.

ArmorWool X

ArmorWool X Board is a general purpose refractory board based on our 2300°F-rated RCF ArmorWool X fiber with selected inorganic and organic fillers to deliver high strength and performance in industrial applications.

ArmorWool HP

Using a unique chemical composition (standard ArmorWool HP fiber) has led to the development of the ArmorWool HP board which has a classification temperature of 2550°F without the use of zirconia.

ArmorWool ZR

ArmorWool ZR Board, with a classification temperature of 2600°F, is a proven solution in applications operating up to temperatures of 2400°F.

All Board formulations contain a small amount of organic binder to improve the cold handling strength and this burns out on first firing at approximately 400-500°F.

Type

ArmorWool Standard Grade Boards are manufactured from high temperature refractory ceramic bulk fibers.

Temperature range

| Boards | Classification Temperature | Maximum Continuous Use Limit* |
|--------------|----------------------------|-------------------------------|
| ArmorWool X | 2300°F | 2100°F |
| ArmorWool HP | 2550°F | 2300°F |
| ArmorWool ZR | 2600°F | 2400°F |

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

Typical applications

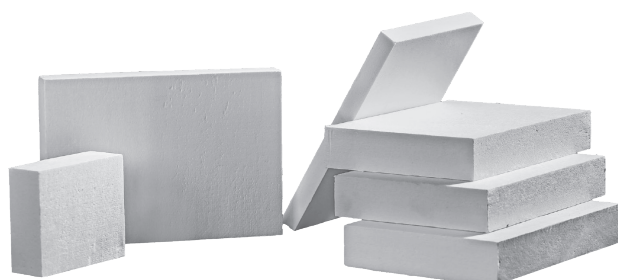
- Thermal insulation for industrial applications
- High temperature back-up insulation for ladles, torpedo cars, troughs and launders
- Tundish and launder covers in the casting of various alloys
- Back-up insulation in melting furnaces and protection of burners for the glass industry
- Lining combustion chamber for gas fired boilers and heaters

Benefits

- High temperature resistance and low shrinkage
- Resistant to erosion from high velocity gasses
- Can be used in direct flame contact
- High strength and easy machining to shape or size
- Resistant to chemical attack
- Excellent thermal insulation and low heat storage

Additional products

Other ArmorWool Board products include Special Grade ArmorWool HT and ArmorWool 2900 and AES ArmorWool LB2200 and ArmorWool LB2400.



| Properties measured | | | Typical Values | | |
|---|--|---|--------------------------------------|--------------------------------------|--------------------------------------|
| | Standard | Unit | ArmorWool X | ArmorWool HP | ArmorWool ZR |
| Color | | | White | White | White |
| Classification temperature | | °F | 2300 | 2550 | 2600 |
| Maximum Continuous Use Limit | | °F | 2100 | 2300 | 2400 |
| Density | | PCF | 17.5- 20 | 17.5- 20 | 18.5- 20 |
| Modulus of Rupture Unfired Fired @ 1832°F | EN 993-6 | PSI PSI | ≥ 100 | ≥ 100 | ≥ 100 |
| Compressive strength Unfired Unfired | EN ISO8895 < 0.75 inch < 0.75 inch | PSI PSI | ≥ 15 ≥ 25 | ≥ 15 ≥ 25 | ≥ 15 ≥ 25 |
| Loss on ignition | GB/T 6900 | wgt% | - | - | - |
| Permanent linear shrinkage | GB/T 17911 | % @ 1650°F @ 1800°F @ 2000°F @ 2200°F @ 2400°F @ 2600°F | < 3 | < 2 | ≤ 2 |
| Thermal conductivity | ASTM C201 | BTU-in/hr-ft2-°F @ 500°F @ 1000°F @ 1500°F @ 1800°F @ 2000°F | 0.45 0.66 0.99 1.26 1.48 | 0.45 0.68 1.06 1.33 1.54 | 0.45 0.68 1.06 1.33 1.54 |

Availability

ArmorWool Standard Grade Boards are available in standard 47.25"x 36" and supplied in cartons which are approximately 5 inches high.

| Dimension | 47.25 x 36 inches | |
|----------------|-------------------|-------------------|
| Thickness (In) | Per carton | Boards per pallet |
| 3/8 | 12 | 192 |
| 1/2 | 10 | 160 |
| 3/4 | 8 | 128 |
| 1 | 5 | 80 |
| 2 | 3 | 36 |
| 3 | 2 | 24 |
| 4 | 2 | 16 |

Product range

ArmorWool Standard Grade Boards are part of an extensive product range of high temperature insulation products provided to meet industry demands for a distributor focused on value, responsiveness and high-quality refractory insulation and specialty products to heat-processing industries.

Technical support

ArmorMax Engineered Systems, Inc. provides help with material selections for applications, engineering services and installation, as well as compliance with applicable regulations and performance standards. For additional information, please contact the team at ArmorMax Engineered Systems, Inc.

Contact

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