

## BTU-BLOCK™ Ladle Liner



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### Features

- Core use limit of 1800°F (982°C)
- Hydrophobic (waterproof) microporous material for cast in-place applications
- Extremely low thermal conductivity
- Easily wrapped or bent to conform to unique shapes
- Large sheet sizes for fast installation
- Pre-cut kits available for more efficient installation
- Other textile facings allow textile use limit up to 1800°F (982°C)

### Product Description

BTU-BLOCK Ladle Liner is comprised of a waterproof version of the microporous material enclosed in a high temperature textile and quilted to form a flexible sheet.

### Product Line Overview

The BTU-BLOCK product line of microporous insulation is designed for use in high temperature industrial applications. BTU-BLOCK uses an optimized blend of raw materials to produce an insulation material with a uniquely low thermal conductivity. Unlike traditional fiber or ceramic based insulation, microporous insulation is based on ultra-fine particles of fumed silica, metal oxides and reinforcement fibers. These particles and fibers create a sub-micron pore structure that limits the convection of air, the conduction of heat, and the transmission of radiation. BTU-BLOCK insulation is designed to provide ultra-low thermal properties throughout the entire temperature range.

### Benefits

- Reduce Energy Waste
- Reduce Temperature Variability
- Reduce Insulation Thickness
- Reduce Cold Face Temperatures

### Applications

- Back-up insulation in high temperature production processes
  - Molten metal ladles
  - Holding furnaces
  - Transfer ladles
  - Launderers
  - Tundishes
  - Pipe wraps
- Commercial ovens

### Physical Characteristics – Core Materials

Continuous use limit, up to, °F (°C)	1800 (982)
Fired linear shrinkage, % (ASTM C356)	
24 hrs @ 1000°F (538°C)	0.3
24 hrs @ 1500°F (815°C)	0.6
24 hrs @ 1750°F (954°C)	1.3
Compression Resistance @ 16 pcf, psi (MPa), ASTM C165	
10% deformation	55 (0.38)
20% deformation	105 (0.71)
30% deformation	155 (1.07)
40% deformation	205 (1.41)

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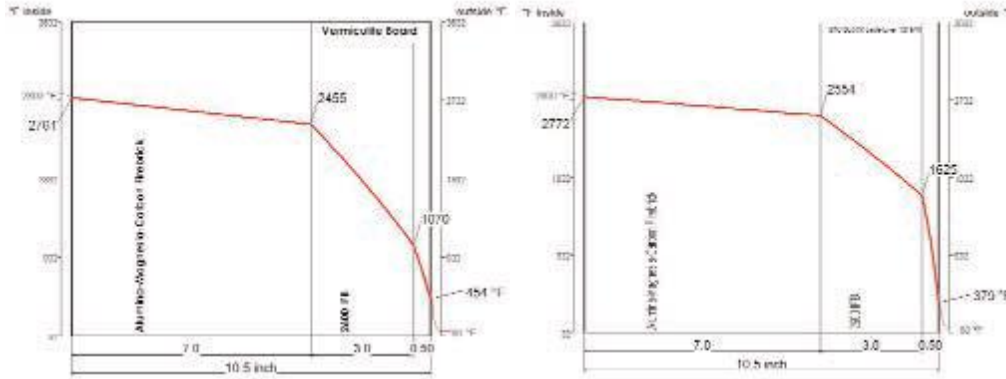
### Thermal Conductivity BTU·in./hr·ft<sup>2</sup>·°F (W/m·K) per ASTM C 201

Mean Temperature

500°F (260°C)	0.22 (0.03)
1000°F (538°C)	0.28 (0.04)
1500°F (817°C)	0.38 (0.05)
1800°F (982°C)	0.45 (0.06)

### Example of BTU-BLOCK Ladle Liner In-Use Application

#### Standard Sizes



16% Reduction in cold face temperature allowing the melt to retain more energy

Density, pcf	Length, in	Width, in	Thickness Availability, in							Stitch Pattern
			0.125	0.1875	0.25	0.3125	0.375	0.4375	0.50	
14	36	36							x	Square or parallel
16	36	36	x	x	x	x	x	x		Square or parallel
14	48	36							x	Square or parallel
16	48	36	x	x	x	x	x	x		Square or parallel
14	72	36							x	Parallel
16	72	36	x	x	x	x	x	x		Parallel

Other sizes / densities are available upon request.

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