

Boro-Block™ Membrane 888 **Urethane Adhesive/Membrane**

PRODUCT DESCRIPTION

Blome Boro-Block™ Membrane 888 is a two-component, high-solids, elastomeric adhesive/membrane based on a unique urethane technology. Boro-Block™ Membrane 888 cures to form a flexible and impermeable membrane that is used to adhere Boro-Block™ Borosilicate Glass Block to a wide variety of properly prepared substrates. This membrane/block system is used protect stacks and ductwork in highly corrosive flue gas desulfurization (FGD) environments. Boro-Block™ Membrane 888 is resistant to most mineral acids including sulfuric, hydrochloric, and phosphoric acid solutions. Boro-Block™ Membrane 888 is also resistant to alkali reagents used to neutralize acidic gases. The material exhibits excellent bond strength to properly prepared substrates, including concrete and steel substrates. Blome Boro-Block™ Membrane 888 remains flexible over a temperature range of –40°C to 150°C and is suitable for brief temperature excursions up to 250°C in upset/bypass conditions that may occur in FGD processes.

TYPICAL USES

Blome Boro-Block™ Membrane 888 is designed for use as an adhesive/membrane in flue gas desulfurization units in coal-fired and oil-fired power plants. When used in conjunction with Boro-Block™ Borosilicate Glass Block, it provides excellent protection against corrosion in areas such as:

- Ductwork
- Chimneys
- Scrubber inlets and outlets

HANDLING CHARACTERISTICS

Blome Boro-Block™ Membrane 888 is supplied as a 2-part, trowel-applied system. Part A is a white paste, and Part B is black, which allows for confirmation of proper mixing. This formulation has ideal handling properties and is smooth-spreading for easy application by steel trowel. Typical trowel application thickness is 3mm in one pass to horizontal and vertical substrates and block side joints.

TYPICAL PROPERTIES **WET**

Components:	Two (2) – Part A (white) and Part B (black)
Solids, %/wt. (mixed):	98, minimum
Mixed density:	1.5 kg/L
Mixed consistency:	Black Paste/Gel
Mix Ratio (A:B by wt.):	11.9:1 at 40-45°C (may use at 10:1 - 14:1 depending on temperature)
Pot life/working time:	25°C – 4 Hours 45°C – 1 Hour
Initial set:	25°C – 12 - 18 hours 45°C – 3 - 4 hours
Final cure:	25°C – 7 days, minimum 45°C – 2 days, minimum

CURED

Water absorption:	< 0.1%/wt.
Bond strength to steel (ASTM D412):	1.1 MPa, min
Color, mixed:	Black
Elongation (ASTM D412):	110%
Temperature resistance, continuous:	150°C, minimum
Temperature resistance, excursions:	250°C
Solids content, by wt.:	98%, minimum
Tensile strength (ASTM D412):	1.75 MPa, minimum

PACKAGING, ESTIMATING & STORAGE

Blome Boro-Block™ Membrane 888 is supplied as a two (2)-component product, consisting of Part A and Part B. Boro-Block™ Membrane 888 components are packaged as follows:

<u>Unit Size</u>	<u>27.1 kg</u>	<u>Coverage</u>
Part A (white)	25.0 kg (Short-filled, 19 L pail)	152mm x 229mm x 38mm block: 6.39 kg/M2 (bed and side joints)*
Part B (black)	2.1 kg (7 x 0.3 kg tubes)	152mm x 229mm x 51mm block: 7.04 kg/M2 (bed and side joints)*

*NO overage included in above figures

Shelf life for Boro-Block™ Membrane 888 components is twelve (12) months at 40-45°C (2 years at 10-21°C). Keep Boro-Block™ Membrane 888 components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight, on pallets at temperatures between 20°C – 30°F. Protect Boro-Block™ Membrane 888 from water and weather in storage and on job site.

BID SPECIFICATION GUIDE

Use Blome Boro-Block™ Membrane 888 as supplied by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Weather conditions, especially dew point, should be constantly monitored. Final blast cleaning and application of membrane-block system must only be performed when the temperature of steel substrates will not fall within 3°C of the dew point. Dehumidification and/or temperature control may be necessary to meet this requirement. Use a surface thermometer to frequently monitor the temperature of steel substrates during installation.

Blome Boro-Block™ Membrane 888 is best applied when ambient temperatures are between 40°C and 45°C. Do not apply at temperatures below 25°C. For best results, keep Boro-Block™ Membrane 888 components at 30°C minimum, for 24 – 36 hours prior to installation. Avoid installing Boro-Block™ Membrane 888 in direct sunlight. Installations of Boro-Block™ Membrane 888 should be protected from water and weather during installation and curing.

SURFACE PREPARATION

Concrete substrates to which Blome Boro-Block™ Membrane 888 will be applied must have a minimum 28 day cure or have a minimum compressive strength of 21 MPa. Minimum tensile strength of concrete must be 2.1 MPa. Concrete must be dry in accordance with ASTM D 4263 Plastic Sheet Test Method. Concrete surfaces must be

free of all laitance, oil, curing compounds and any dust or other loose materials prior to installation of Boro-Block™ Membrane 888.

Concrete substrates to which Blome Boro-Block™ Membrane 888 will be applied should be primed using Blome Primer 75 prior to installation of the membrane. Apply Primer 75 to prepared concrete substrates using brush or roller, making certain to work primer into the pores of the concrete. Allow primer to cure tack free or until the next day prior to the installation of Boro-Block™ Membrane 888/Boro-Block™ Glass Block System.

Steel substrates should be prepared by abrasive blasting to achieve near white metal clean SSPC 10. Blasted steel substrates must not be allowed to flash rust prior to installing membrane. Apply Primer 75 to hold blast. Allow primer to cure tack free or until the next day prior to the installation of Boro-Block™ Membrane 888/Boro-Block™ Glass Block System.

SAFETY PRECAUTIONS

Boro-Block™, Boro-Block™ Membrane 888 Part A, Part B, mixes of them, and Primer 75 present various health hazards if handled improperly. Boro-Block™ dust will cause eye and respiratory tract irritation. Wear respirator suitable for organic vapors, safety glasses with side shields, gloves, and long sleeve shirts to prevent all contact with skin and eyes. After working with Boro-Block™ components, wash thoroughly before eating, drinking, smoking or other activities.

MIXING AND APPLICATION

Blome Boro-Block™ Membrane 888 is best mixed with a drill motor driven paddle blade or “Jiffy” PS-1 mixer. All mixing and application equipment must be clean, dry, and free of any contaminants including Portland cement, other mortars, or resins. Boro-Block™ Membrane 888 is designed for use in warm climates (40-45 °C). The minimum application temperature is 25 °C.

Mix contents of Part A pail for 1-2 minutes before adding Part B. Continue mixing and slowly add Part B to Part A and blend thoroughly for an additional 1-2 minutes. Part A is white, and Part B is black. The mix will be black when fully mixed. Note – Part B is supplied in 7 x 300g tubes (2.1 kg total) for use with EACH 25 kg pail of Part A. This mix ratio (11.9:1, by weight, Part A:Part B) is optimal for temperatures of 40-45°C. The amount of Part B can be increased to 10:1 (Part A to Part B) at temperatures of 25°C. This is achieved by adding one more 300g tube (8 tubes instead of 7) of Part B to the 25 kg pail of Part A. At temperatures of 50°C or above, the amount of Part B can be reduced to 14:1 (Part A:Part B). This is achieved by using one less tube of Part B (6 instead of 7) per 25 kg pail of Part A.

Ensure sides and bottom of pail are scraped during mixing (no streaks of white or gray material will be present when properly mixed). Mix only full kits - DO NOT split kits. Boro-Block™ Membrane is applied with a trowel on Boro-Block™ bed and side joints at a nominal thickness of 3mm.

CLEANUP

All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using a citrus or biodegradable cleanser, with hot water, while material is still wet. If material begins to cure, solvent-based cleaners will be required for removal.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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