

MBrace™ Composite Strengthening System

DESCRIPTION:

The MBrace™ composite strengthening system is a high performance, carbon or glass fiber reinforced laminate system that is used to strengthen concrete and masonry structures. The field-proven technology of the system consists of advanced materials including system specific impregnating resin, surface primer, putty and fiber reinforcement sheets.

It is the fiber reinforcement material that provides the high strength-to-cross section ratio when it is applied within a resin system to a surface. The result is similar to bonding steel plates to concrete surfaces, with the exception of the time and cost that is required for the installation and grouting of the metal. In addition to returning to, or improving upon, original structural integrity, the MBrace system offers a high level of protection.

TYPICAL USES:

- Structural upgrade and/or change of use
- Correction of design imperfections
- Blast resistance
- General infrastructure repair
- Seismic retrofit
- Additional load requirements

ADVANTAGES:

- Increased strength
 - Flexure
 - Shear
 - Blast resistance
 - Fatigue resistance
 - Confinement
- Lightweight
- Durable
- Control of crack propagation
- High strength-to-cross section ratio

SYSTEM COMPONENTS:

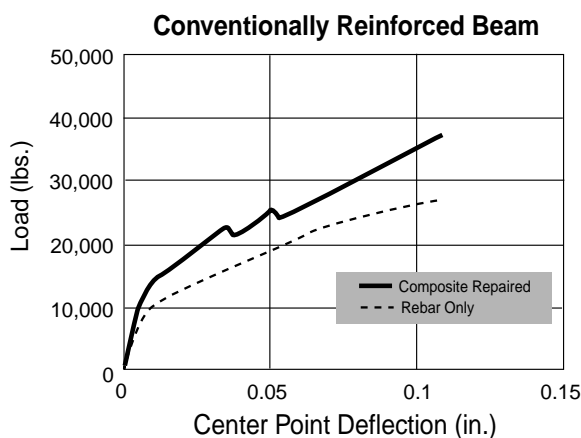
The MBrace system consists of five components.

- MBrace Primer
- MBrace Putty filler
- MBrace Saturant resin
- MBrace Fiber Reinforcement
 - MBrace CF 530 carbon fiber system
 - MBrace CF 130 carbon fiber system
 - MBrace EG 30 e-glass system
- MBrace Topcoat

COLORS:

Carbon fiber sheets - Black.
E-glass sheets - White.

PHYSICAL PROPERTIES*:



Tensile Strength: 550 ksi (3820 MPa)
(ASTM D 3039 with aluminum tabs; MBrace Saturant with MBrace C1-30 carbon fiber reinforcement)

Overlap Strength: 520 ksi (3590 MPa)
(ASTM D 3039 with aluminum tabs, 4 in. overlap region; MBrace Saturant with carbon fiber reinforcement)

Adhesion Strength: > 200 psi (1.5 MPa),
(ASTM D 4541; MBrace Saturant) bulk failure of concrete substrate

Peeling Test: bulk failure
(MBrace Primer and MBrace Putty Cured @ 73 °F {23 °C}; Relative humidity @ 85% for 24 hours before fiber reinforcement system application)

NOTES:

* Denotes use of one layer of MBrace CF 130 carbon fiber reinforcement system.

PACKAGING:

- MBrace Primer: 4 gal & 1 gal unit
- MBrace Putty: 1 gal unit
- MBrace Saturant resin: 4 gal & 1 gal unit
- MBrace Fiber Reinforcement
 - MBrace CF 530 carbon fiber 540 ft² / roll
 - MBrace CF 130 carbon fiber 540 ft² / roll
 - MBrace EG 30 e-glass 540 ft² / roll
- MBrace Topcoat: 1 gal and 4 gal units

SAFETY:

Store in cool, dry area [50 to 90 °F (10 to 32 °C)] away from direct sunlight, flame or other hazards.

Some MBrace materials contain carbon or glass fibers. During application of MBrace materials, wear appropriate work clothing to minimize contact. Use caution when handling flammable liquids and eliminate all sources of ignition from work area.

Product Material Safety Data Sheets (MSDS) are available and should be consulted and on hand during application and/or whenever handling these products.

These products are for professional and industrial use only; application directions must be followed.

MAINTENANCE:

Periodically inspect the applied material and repair localized areas as needed. Consult your Master Builders representative for additional information.

Components provided by:

Master Builders, Inc.
United States
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 Cleveland, Ohio 44122-5554
 (800) MBT-9990

Canada
 3637 Weston Road
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 (800) 387-5862
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 53390 Naucalpan, México
 011-525-557-5544
 Fax 011-525-395-7903

Master Contractor:

STRUCTURAL PRESERVATION SYSTEMS, INC.



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 800-899-1016

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