

MBRACE[®] EG900

E-Glass Fibre Reinforcement System for MBrace Composite Strengthening System

DESCRIPTION

The **MBrace EG900** is the backbone of the MBrace Composite Strengthening System. **MBrace EG900** is enveloped in MBrace Saturant resin to yield a range of high performance features.

MBrace Composite Strengthening Systems incorporate the **MBrace EG900** E-Glass fibre and MBrace CF130W carbon fibre. Each fibre reinforcement system within the MBrace Composite Strengthening System permits high strength-to-weight ratio and structural integrity that is similar to bonding steel plates to concrete surfaces.

FIELDS OF APPLICATION

- Walls, beams and slabs of buildings
- Beams, deck slabs and columns of bridges
- Chimneys and towers
- Silos and tanks
- Pipes and tunnels
- Marine structures

FEATURES AND BENEFITS

Improves concrete performances	Increased flexural strength, shear, confinement, ductility, seismic and enhanced fatigue resistance.
Easy to install	Able to adapt to any shapes; lightweight and suitable for space-constraint areas.
Durable	High strength-to-weight ratio, well control of crack propagation and corrosion resistant.

TYPICAL PERFORMANCE DATA

MBrace EG900

Density, g/m ²	: 910.74
Tensile Strength, N/mm ²	: 1,667
Thickness, mm	: 0.353
Ultimate Tensile Elongation, %	: 2.0
Width, mm	: 500 and 600

MBrace Composite Strengthening System using MBrace EG900

Tensile Strength, N/mm ²	: 500
Tensile Elongation, %	: 2.0
Tensile modulus, N/mm ²	: 28,000
Thickness, mm	: 1.10
Shear Bond Strength (on G40 concrete), N/mm ²	: 2.5 or concrete substrate failure

PROPERTIES

Generic Type	: E-Glass
Colour	: White
Density, g/cm ³	: 2.58
Modulus, N/mm ²	: 72,400

APPLICATION

Surface Preparation

Proper substrate preparation is critical for optimum performance. The prepared surface should be structurally sound and free from contaminants such as oil, grease, curing membrane, previous coatings, dust, fungus, mass, etc.

Depending on the substrate condition and environmental requirements, use an effective method recommended by ICRI Guideline No. 03732 for selecting and specifying concrete surface preparation for sealers, coatings and polymer overlays.

Primer

Mixing

3 volumes of MBrace Primer Part A to 1 volume of MBrace Primer Part B. Blend with a mechanical mixer for at least 3 minutes or until it is homogeneous. Mixing time may be adjusted according to the temperature during application.

Placing

Apply the MBrace Primer to the intended substrate using a brush or short nap roller. Spray application of MBrace Primer is not recommended. MBrace Primer is applied only once to the concrete substrate even when multiple piles are required.

Saturant

Mixing

3 volumes of MBrace Saturant Part A to 1 volume of MBrace Saturant Part B. Blend with a mechanical mixer for at least 3 minutes or until it is homogeneous. Mixing time may be adjusted according to the temperature during application.

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Placing

Apply the catalysed MBrace Saturant to the **MBrace EG900** until fully saturated. The appearance of the MBrace Saturant, when applied by roller should be translucent blue. The colour of the application will vary due to overlaps and slight thickness variations.

Fibre

Placing

Place the fully-impregnated **MBrace EG900** unto the primed concrete substrate.

For multiple plies, repeat application procedure as in Saturant and Fibre.

Top coat (Optional)

Use high solids, high gloss, corrosion-resistant topcoat to provide a protective/aesthetic outer layer.

ESTIMATING DATA

Primer	: 0.15-0.25 kg/m ² Coverage may vary depending on density of concrete
Saturant	: 0.5-0.7 kg/m ² per layer of fibre sheet.
MBrace EG900	: Cut according to the area to be reinforced.

PACKAGING

	Width, m	Length, m
23.0 m ² per roll	0.5	46.0
52.5 m ² per roll	0.6	91.4

SHELF LIFE

MBrace EG900 can be kept for at least 24 months from date of manufacture if stored in a dry enclosed place at temperatures between 10 and 32°C without exposing to direct sunlight, flame or other hazards.

PRECAUTIONS

MBrace EG900 contains E-glass fibres. Wear gloves and appropriate work clothing while handling the product. Wash thoroughly after handling.

Eliminate all sources ignition from work area.

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

For detailed Health, Safety and Environmental Recommendations, please refer and follow all instructions on the product Material Safety Data Sheet.

AN/MBraceEG900/v2/060409

STATEMENT OF RESPONSIBILITY

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