



The Chemical Company

PRODUCT DATA

3 03 01 00 Maintenance of Concrete

Mbrace® PRIMER

Low viscosity epoxy primer for the Mbrace® Composite Strengthening System

Description

Mbrace® Primer is a low viscosity, 100% solids, polyamine cured epoxy. As the first applied component of the Mbrace® System, it is used to penetrate the pore structure of cementitious substrates and to provide a high bond base coat for the Mbrace® System. Mbrace® Primer is based on a unique adduct curing technology that results in tolerance for surface moisture and for temperatures down to 35 °F (2 °C).

Yield

Steel:
250 to 325 ft²/gal (6.1 to 8.0 m²/L)

Concrete:
200 to 250 ft²/gal (4.9 to 6.1 m²/L)

Masonry (Concrete):
150 to 200 ft²/gal (3.8 to 4.9 m²/L)

Masonry (Clay):
200 to 250 ft²/gal (4.9 to 6.1 m²/L)

(Coverage rate on concrete and masonry may vary depending on density and porosity of the substrate)

Packaging

Available in 1 gal (3.8 L) units. Each unit is packaged as follows:

	VOLUME	PACKAGING	WEIGHT
Part A	3 qts	2 gal pail	7 lbs
Part B	1 qt	1 qt can	2 lbs

Features

- Moisture tolerant
- Low viscosity
- 100% solids epoxy
- Suitable for low-temperature application

Benefits

- Can be applied on some damp substrates
- Easily penetrates pore structure of concrete
- Low odor, low VOC's
- Can be applied if temperature is 35 degrees F and rising; extends application window in cooler conditions

Color

Part A: Amber

Part B: Clear

Mixed: Amber

Shelf Life

18 months properly stored in unopened containers (Part A and B)

Storage

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

Where to Use

APPLICATION

Mbrace® Primer is the first component of the Mbrace® System that is applied to concrete, steel, and masonry substrates. Mbrace® Primer is used to provide excellent adhesion of the Mbrace® System to the substrate.

- Mbrace® Primer is the first component any Mbrace® installation

LOCATION

- Vertical
- Horizontal
- Exterior
- Interior

SUBSTRATE

- Concrete
- Masonry
- Steel



Technical Data

Composition

MBrace® Primer is a two component polyamine cured epoxy

Handling Properties

PROPERTY	VALUE
Mixed Weight	9.2 lb/gal (1103 g/L)
VOC Content	0.71 lb/gal (84.1 g/L)
Flash Point	Part A: 204 °F (95 °C) Part B: > 200 °F (93 °C) (Pensky-Martens Closed Cup)
Mixed Viscosity	
at 50 °F (10 °C)	1200 cps
at 77 °F (25 °C)	400 cps
at 90 °F (32 °C)	200 cps

Physical Properties

PROPERTY	VALUE
Installed Thickness(approx)	3 mils (0.075 mm)
Density	68.8 pcf (1102 kg/m ³)

Tensile Properties (1)

PROPERTY	VALUE
Yield Strength	2100 psi (14.5 MPa)
Strain at Yield	2.0%
Elastic Modulus	105 ksi (717 MPa)
Ultimate Strength	2500 psi (17.2 MPa)
Rupture Strain	40%
Poisson's Ratio	0.48

Compressive Properties (2)

PROPERTY	VALUE
Yield Strength	3800 psi (26.2 MPa)
Strain at Yield	4.0%
Elastic Modulus	97 ksi (670 MPa)
Ultimate Strength	4100 psi (28.3 MPa)
Rupture Strain	10%

Flexural Properties (3)

PROPERTY	VALUE
Yield Strength	3500 psi (24.1 MPa)
Strain at Yield	4.0%
Elastic Modulus	86.3 ksi (595 MPa)
Ultimate Strength	3500 psi (24.1 MPa)
Rupture Strain	Large deformation with no rupture

Functional Properties (4)

PROPERTY	VALUE
CTE	20-10 °/F (35-10 °/C)
Thermal Conductivity	1.39 Btu·in/hr·ft ² ·F (0.20 W/m·°K)
Glass Transition Temp, T_g	171 °F (77 °C)

NOTES:

1. Based on testing of cured samples per ASTM D 638 at 72°F (20°C) and 40% relative humidity.
2. Based on testing of cured samples per ASTM D 695 at 72°F (20°C) and 40% relative humidity.
3. Based on testing of cured samples per ASTM D 790 at 72°F (20°C) and 40% relative humidity.

How to Apply

Surface Preparation

1. Substrate should be fully cured, clean, sound, and dry. Any damaged areas, spalled areas, delaminated areas, or areas with corrosion damage must be repaired prior to applying the MBrace system.

2. For concrete and masonry substrates, mechanically prepare the substrate to remove coatings, laitance, and all miscellaneous surface contaminants and to provide a proper surface profile. Surface profile should be a minimum of ICRI CSP 3 (similar to 80 grit sandpaper).

3. For steel substrates, abrasive blast to “white metal” in accordance with Society for Protective Coatings (SSPC) Specification SP-5-89 or NACE No. 1, using clean, dry abrasive to obtain a minimum 3 mil profile.

Mixing

1. The mix ratio is 3:1 (Part A to Part B) by volume or 100:30 (Part A to Part B) by weight. Mix only the amount of material that can be used within the working time of the material. Approximate working times for a 1 Gal (3.8 L) unit are:

75 min	at 50° F (10° C)
20 min	at 77° F (25° C)
10 min	at 90° F (32° C)

2. Carefully measure (ratio) each component and then add Part B (hardener) to Part A (resin).

3. Mix Parts A and B using a low-speed drill (600 rpm) and mixing paddle (e.g., a Jiffy mixer). Carefully scrape the sides and bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 – 5 minutes. Well-mixed material will be free of streaks or lumps.

Application

1. Apply the material in areas to receive the MBrace system using a 3/8” nap roller or short bristle brush to a wet film thickness of approximately 3-mils.

2. Spray application is not recommended.

Clean Up

Use T-471, methyl ethyl ketone or acetone. Observe fire and health precautions with solvents.

Maintenance

Periodically inspect the applied material and repair localized areas as needed. Consult a BASF representative for additional information. Visit us on the web for the most current product information and news: www.BASFBuildingSystems.com.

For Best Performance

- Only apply MBrace® Primer when the ambient temperature is between 35° and 120°F (2° and 50°C).
- Subsequent components of the MBrace® System should be applied within 48 hours of applying MBrace® Primer to the substrate to assure proper adhesion.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Health and Safety

MBRACE® PRIMER

Warning

Vapor may be harmful. Contains epoxy resins and curing agent. May cause skin sensitivity or other allergic responses. Keep away from heat, sparks or open flame. In enclosed areas or where ventilation is poor use an approved air mask and utilize adequate safety precautions to prevent fire or explosion. In case of skin contact, wash with soap and water. For eyes, flush immediately (seconds count) with water for 15 minutes and CALL A PHYSICIAN. If swallowed, CALL A PHYSICIAN IMMEDIATELY.

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

These products are for professional and industrial use only and are only installed by trained and qualified applicators. Trained applicators must follow installation instructions.

