

MasterBrace® P 3500

Epoxy Based Primer for MasterBrace® FRP System

DESCRIPTION OF PRODUCT

MasterBrace® P 3500 is epoxy based, solvent free, low viscosity primer developed for **MasterBrace® FRP System**.

FIELDS OF APPLICATION

- Priming the concrete surfaces under FRP (carbon, glass and aramide) sheets and laminates.

FEATURES AND BENEFITS

- Easy to apply
- Low viscosity.
- High strength
- Excellent bonding to concrete substrates
- Solvent free

APPLICATION PROCEDURE

Preparation of Substrate

The mineral based substrates (concrete, stone, brick, tile etc.) must be sound, clean and dry. It shouldn't be weakened by over-troweling and lack of curing. The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable

material and dust. If there is a water leakage it must be drained or properly plugged. The surfaces must be dry (moisture content of the concrete should be < 4%). In case of low strength concrete ($\sigma_{tc} < 1.5 \text{ N/mm}^2$), the loosen parts of concrete must be broken and the surfaces should be refilled with structural repair mortars in **MasterEmaco® S** range. Before the primer application let the repair mortars cure at least 7 days at 20°C.

Mixing

MasterBrace® P 3500 has two parts in pails, produced according to right mixing ratio. Material temperature should be between 15 - 25°C before mixing. Part B should be added into the Part A without any remaining material in the pail. It should be mixed with using a proper mixer (~300rpm) for polymer mixing. Mix the parts at least 3 minutes to have a homogenous mixture.

Mixing

MasterBrace® P 3500	Part A	Part B
Quantity	2,76 kg	1,24 kg
Mixed Density	1,08 kg/liter	

TECHNICAL DATA

Product Chemistry MasterBrace® P 3500 Part A MasterBrace® P 3500 Part B	Epoxy Resin Epoxy Hardener
Color	Clear
Mixed Density	1,08 ± 0,024 kg/liter
Solid Content	%100
Flexural Strength TS EN 196 (7 days)	> 20 N/mm ²
Bonding Strength to Concrete (7 days)	>otc N/mm ²
Application Temperature	+5°C - +30°C
Pot Life	8 hours 2 hours 45 minutes 25 minutes
	-1°C 7°C 21°C 32°C
Application Thickness	0,1 – 0,2 mm
Recoatable After	12-24 hours
Coating with MasterBrace® FRP	9 hours 5 hours 3 hours Max. 48 hours
	-1°C +7°C +21°C +32°C
Fully Cured at 20°C	7 days

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations

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APPLICATION METHOD

MasterBrace® P 3500 should be applied to the concrete surfaces by using a soft roller. Application thickness should be between 0.1-0.2 mm.

COVERAGE

0.2 kg/m²

WATCH POINTS

- **MasterBrace® FRP** application should be done by approved experts.
- During the application the substrate and ambient temperature should be between 5 - 30°C.
- Resinous materials' pot life and curing times vary depending on the relative humidity, substrate and ambient temperature. Reaction gets slow in low temperatures and it causes to extension on pot life and working time. On the other hand high temperatures speed up the reaction, which results to short pot life and working time. For full curing of material, both the substrate and ambient temperature shouldn't be under allowed application temperature.
- **MasterBrace® P 3500** is provided in ready to mix pails. Do not add any solvent etc. Into the mixture during the application.
- The amount of mixed resin should be such that it may be applied within its useful workability time.
- Mixing should be made with proper mixers and do not allow mixing by hand.

CLEANING OF TOOLS

After the application all tools should be cleaned with a proper detergent or solvent such as thinner. **MasterBrace® P 3500** can be cleaned with only mechanical abrasion after hardening.

PACKAGING

4 kg set
Part A: 2.76 kg pail
Part B: 1.24 kg pail

STORAGE

Store in original container in cool (+5°C - +25°C) and dry indoor conditions.

SHELF LIFE

18 months under proper storage conditions after production date.

HEALTH AND SAFETY PRECAUTIONS

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixtures should not come into contact with skin and eyes; in case of contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

DISCLAIMER

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is only responsible for the quality of the product **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

CONTACT INFORMATION

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MasterBrace® P 3500 Technical Data Sheet -Revision
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<p>Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti. Adres: Barbaros Mah. Begonya Sok. Nidakule Kuzey Ataşehir, C Kapısı No:3 E/5, 34746 Ataşehir İstanbul 20 DOP NO: 04.1504.2.001 EN 1504-2 :2004</p>	
<p>MASTERBRACE P 3500 Beton Yapıların Korunması ve Tamiri İçin Mamuller ve Sistemler. Bölüm:2 Beton için Yüzey Koruma Sistemleri (Products and systems for the protection and repair of concrete structures Part 2: Surface protection systems for concrete) Prensip 1: Yabancı madde girişine karşı koruma 1.2 (I) : Emprenye uygulaması (Principle 1 : Ingress protection) (1.2 (I):Impregnation) Prensip 5 : Fiziksel direnç 5.2 (I):Emprenye uygulaması (Principle 5 : Physical Resistance) (5.2 (I) Impregnation)</p>	
Kapiler su emme ve su geçirgenliği (Capillary absorption and permeability to water)	w<0,1 kg/m ² ·h
Aşınma Direnci (Abrasion Resistance)	Emprenye uygulanmış numunenin aşınma direnci, emprenye uygulanmamış numuneden en az % 30 daha yüksek olmalıdır (30% improvement in abrasion resistance in comparison with a non impregnated sample)
Çekip koparma deneyi yoluyla yapışma dayanımı (Adhesion strength by pull-off test)	Rijit Sistemler (Rigid Systems) Trafik yük ile birlikte: >2,0 N/mm ² (1,5 min) With trafficking:>2,0 N/mm ² (1,5 min)
Yangına karşı tepki (Reaction to fire)	E
Tehlikeli maddeler (Dangerous substances)	Madde 5.3'e uygun (Comply with clause 5.3)