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MAPEI®

Planibond® EBA

High-Modulus Epoxy Bonding Agent

GREEN INNOVATION

DESCRIPTION

Planibond EBA is a two-component, multipurpose high-modulus epoxy bonding agent. *Planibond EBA* is nonshrink, 100%-solids and moisture-insensitive. *Planibond EBA* is used primarily as a bonding agent for screeds and repair mortars, with applications for anchoring and crack repair. *Planibond EBA* meets ASTM C881 requirements.

USES

Planibond EBA is a multipurpose product used for a variety of applications, including:

- Bonding agent for adhesion of fresh concrete and screed mortars to cured concrete and epoxy-primed steel.
- Grout used to install anchors, bolts, dowels, rods, steel bars and faceplates.
- Epoxy repair mortar with the addition of select aggregates.
- Structural crack filler in gravity feed applications.
- Structural adhesive for properly prepared concrete, masonry, metal and wood surfaces.

RECOMMENDED SUBSTRATES

- Concrete, masonry, metal and wood substrates. Concrete and masonry substrates must be at least 28 days old. Moisture vapor transmission cannot exceed 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m^2) per 24 hours using a calcium chloride test (reference ASTM F1869).
- Do not apply *Planibond EBA* over nondimensionally stable materials.

Consult MAPEI's Technical Services Department for installation recommendations regarding exterior on-grade substrates and conditions not listed.

TECHNICAL NOTES

- *Planibond EBA* can only be used between the temperatures of 50°F and 95°F (10°C and 35°C). For temperatures above 85°F (29°C), take appropriate precautions to keep material cool and to keep it out of direct sunlight and significant air movement. Higher temperatures will decrease the setting time; cooler temperatures will increase the setting time.
- *Planibond EBA* is a two-component product, with no additional ingredients required. Do not add water or thin with solvents.
- Always apply fresh concrete, repair mortars and screed mortars to *Planibond EBA* while it is tacky. Once *Planibond EBA* has been applied to the substrate, it will need some time to become sufficiently tacky; time will vary based on such factors as mixing time, ambient air temperature and substrate temperature. Do not let material lose tack or harden before application, or *Planibond EBA* will act as a bond-breaker and prevent adhesion to the substrate.

SURFACE PREPARATION

1. Mechanically clean and prepare concrete substrate by shotblasting, scarifying, or other engineer-approved methods. Prior to application thoroughly clean the surface of any substance that could interfere with the bond of the installation material, including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, sealers, curing compounds, form release agents, laitance, loose toppings, foreign substances and adhesive residue. Clean steel mechanically to remove any corrosion or coating (to a white metal finish) before application of *Planibond EBA*.
2. Concrete substrate and ambient room temperatures must be between 50°F and 95°F (10°C and 35°C) before to application. Temperatures must be maintained within this range for at least 72 hours after the installation of *Planibond EBA* and finished material.
3. Substrates must be dry or damp. Do not apply *Planibond EBA* on standing water.

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MIXING

1. Store *Planibond EBA* components at room temperature before mixing.
2. Using a "jiffy" mixing paddle, stir individual components separately before combining.
3. Using a low-speed mixer (at about 300 to 550 rpm) and a "jiffy" mixing paddle, mix Part A with Part B together thoroughly for 3 minutes until achieving a uniformly mixed material. Stop after about a minute to scrape excess off sides of the mixing container. Mix to a smooth, homogenous consistency. Do not mix at high speeds, which can trap air within the mixed material. Always ensure that well-mixed equal amounts of Part A are combined with the same of Part B.
4. Only mix as much material as can be applied within the pot life (about 30 minutes). Warm temperatures and/or mixing a large volume of material at a time can greatly reduce the pot life of epoxy.

APPLICATION

Make sure the concrete substrate and ambient room temperatures are between 50°F and 95°F (10°C and 35°C) before application. Temperatures must be maintained within this range for at least 72 hours after the installation of bonding agent and finished material. In cooler conditions, use indirect auxiliary heaters to maintain ambient and substrate temperatures within the required range. To ensure a successful installation for temperatures above 85°F (29°C), consider ACI 305R-99 hot-weather concreting guidelines and take steps to ensure material is kept cool, out of direct sunlight, and free from significant air movement.

Application as a bonding agent

For ease of application, apply on a substrate with a CSP of 1 to 4.

1. Apply the bonding agent onto the substrate with a brush, roller, broom or trowel, working material into the profiled substrate. Completely cover all areas of substrate that will receive the concrete, screed mortar or repair mortar.
2. Apply *Planibond EBA* at a thickness of 20 mils (0,5 mm).
3. Concrete, screed mortars and repair mortars must be placed onto the *Planibond EBA* while it is tacky to ensure a successful installation.

Application as a crack filler

1. Apply "neat" for applications up to 1/4" (6 mm) in thickness.
2. For applications of 1/4" to 1/2" (6 to 12 mm), add a selected dry aggregate (1.5 to 4 parts by volume of aggregate [70 to 80% silica retained on sieves #30 to #50]). Use only sorted, oven dried aggregate.

Application as a baseplate grout

1. For base-plate applications, use extended material (1.5 parts by volume of aggregate as defined above) up to 1-1/2" (3,8 cm) thick. Pour and work material from one side, allowing it to flow to the other side of the base plate. This will allow for displacement of air and full contact to the bottom side of the base plate. Or, if appropriate, use MAPEI's *Planigrout® 740* construction grout or *Planigrout 830 SP* Epoxy Machine Baseplate Grout. Consult the Technical Data Sheet.

For use in anchoring applications

1. For anchoring, drill a hole 1/4" (6 mm) larger than the anchor itself (example: for a 3/4" [19 mm] bar, drill a 1" [2,5 cm] hole). This will allow for a 1/8" (3 mm) annular space around the bar. The depth of the hole should be 10 to 15 times larger than the bar diameter. Brush and blow out the hole with oil-free compressed air several times, removing dust and bond-inhibiting materials. Pour enough neat material into the hole so that it will become flush with the surface once the bar is inserted. Insert the bar slowly into the hole while slowly twisting in one direction.

Application as an epoxy repair mortar for concrete substrates (interior use only)

1. Prime the area to be repaired with "neat" mixed *Planibond EBA*.
2. For mortar, add up to 4 parts by volume of selected dry aggregate to 1 part of mixed neat *Planibond EBA*. While the prime coat is still tacky, apply the epoxy repair mortar up to 2" (5 cm) per lift. Allow material to harden between lifts, apply next lift (primer and mortar) within 24 hours.

CLEANING

Clean tools and protective gear with mineral spirits. Cured material can only be mechanically removed.

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Product Performance Properties

Laboratory Tests	Results
Pot life	
At 50°F (10°C)	2 hours
At 73°F (23°C)	50 minutes
At 86°F (30°C)	20 minutes
Normal working time	
At 50°F (10°C)	5 hours
At 73°F (23°C)	3 hours
At 86°F (30°C)	2 hours
Final cure at 68°F (20°C)	15 days
Viscosity	Medium (5300 - 5900 cps)
Compressive strength (ASTM D695)	
7 days	11,380 psi (78,5 MPa)
28 days	12,420 psi (85,7 MPa)
Modulus of elasticity (ASTM D695)	
7 days	352,250 psi (2 429 MPa)
28 days	359,750 psi (2 481 MPa)
Flexural strength (ASTM D790) (modulus of rupture)	
14 days	3,307 psi (22,8 MPa)
Tangent flexural modulus of elasticity (ASTM D790)	
14 days	261,000 psi (1 800 MPa)
Bond strength (ASTM C882)	
2 days (moist cure), Type 1	1,044 psi (7,2 MPa)
14 days (moist cure), Type 1	1,943 psi (13,4 MPa)
14 days (moist cure), Type 2	1,812 psi (12,5 MPa)
14 days (dry cure)	2,248 psi (15,5 MPa)
Bond strength by pull-off method (ASTM C1583)	
3 days	Rupture in concrete at 450 psi (3,10 MPa)
7 days	Rupture in concrete at 464 psi (3,2 MPa)
14 days	Rupture in concrete at 495 psi (3,41 MPa)
28 days	Rupture in concrete at 550 psi (3,79 MPa)
Tensile strength (ASTM D638)	
14 days, Type 1	5,018 psi (34,6 MPa)
14 days, Type 2	2,015 psi (13,9 MPa)
Tensile elongation at break (ASTM D638)	
14 days, Type 1	1.6%
14 days, Type 2	1.0%
Modulus of elasticity/tension (ASTM D638)	
14 days, Type 1	377,000 psi (2 600 MPa)
14 days, Type 2	247,000 psi (1 703 MPa)
Shear strength (ASTM D732)	
14 days	4,220 psi (29,1 MPa)
Water absorption (ASTM D570) (2 hours boiling)	
7 days, total water absorption	0.4%
Flexural resistance heat deflection temperature (ASTM D648) 14 days – deflection temperature	
Fiber stress loading = 72.5 psi (0,5 MPa)	132°F (56°C)
Fiber stress loading = 261 psi (1,8 MPa)	125°F (52°C)

Shelf Life

Shelf life	2 years
Storage	Store in cool, dry place. Protect from freezing.

Packaging

Product Code	Size
40169000	Part A, 5 U.S. gals. (18,9 L)
40269000	Part B, 5 U.S. gals. (18,9 L)
40158000	Kit: 2 U.S. gals. (7,57 L)

Approximate Coverage* (as a bonding adhesive)

Size	Yield
Smooth surface	100 sq. ft. per U.S. gal. (2,45 m^2 per L)
Rough surface	50 to 75 sq. ft. per U.S. gal. (1,25 to 1,84 m^2 per L)

** Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions and setting practices.*

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Refer to MAPEI's MSDS for specific data related to VOCs, health and safety, and handling of product.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

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For the most current BEST-BACKED™ product data and warranty information, visit www.mapei.com.

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