



# Planibond<sup>®</sup> EBA

## High-Modulus Epoxy Bonding Agent



### DESCRIPTION

*Planibond EBA* is a two-component, multipurpose, high-modulus epoxy bonding agent. *Planibond EBA* is nonshrink, 100%-solids and moisture-tolerant. *Planibond EBA* is used primarily as a bonding agent for screeds and repair mortars.

### FEATURES AND BENEFITS

- Easy-to-use, two-component formula with a 1-to-1 ratio of Part A and Part B
- Medium viscosity for easy placement by brush or roller
- Provides a gray color when mixed

### INDUSTRY STANDARDS AND APPROVALS

LEED v4 Points Contribution

LEED Points

Health Product Declaration (HPD)\* .....Up to 2 points

\* Using this product may help contribute to LEED certification of projects in the category shown above. Points are awarded based on contributions of all project materials.

### WHERE TO USE

- For bonding fresh concrete and screed mortars to cured concrete and epoxy-primed steel
- As a grout for installing anchors, bolts, dowels, rods, steel bars and faceplates
- As an epoxy repair mortar with the addition of select aggregates
- As a crack filler in gravity-feed applications
- As a structural adhesive for properly prepared concrete, masonry, metal and wood surfaces

### LIMITATIONS

- *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 the material cool and away from 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 the material 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 ambient air temperature and substrate temperature. Do not allow the material to become tack-free or harden before application, or *Planibond EBA* will act as a bond-breaker and prevent adhesion to the substrate.

### SUITABLE 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<sup>2</sup>) 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 substrates and conditions not listed.

### SURFACE PREPARATION

- Mechanically clean and prepare concrete substrate by shotblasting, scarifying or other engineer-approved methods. Before 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 near white metal finish) before application of *Planibond EBA*.

- Concrete substrate and ambient room temperatures must be 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 *Planibond EBA* and finished material.
- Substrates must be dry or damp. Do not apply *Planibond EBA* on standing water.

## MIXING

Choose all appropriate safety equipment before use. Refer to the Safety Data Sheet for details.

1. Store *Planibond EBA* components at room temperature before mixing.
2. Using a Jiffy mixing paddle, mix *Planibond EBA*'s individual components separately before combining them.
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 material from the 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. Warm temperatures and/or mixing a large volume of material at a time can greatly reduce the pot life of epoxy.

## PRODUCT APPLICATION

### Application as a bonding agent

1. For ease of application, apply on a substrate with a CSP of #1 to #4.
2. 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.
3. Apply *Planibond EBA* at a thickness of 15 to 20 mils.
4. Concrete, screed mortars and repair mortars must be placed onto *Planibond EBA* while it is tacky. Alternatively, a sand broadcast to complete rejection should be performed if concrete or toppings can be installed before curing. Use sand of #16 mesh in size for installing *Ultratop® PC*, and sand #20 to #40 mesh in size for installing *Ultratop*.

### 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. Add up to 4 parts by volume of trowel-grade aggregate to 1 part of neat-mixed *Planibond EBA*. While the primer coat is still tacky, apply the epoxy repair mortar up to 2" (5 cm) thick per lift. Allow the material to harden between lifts, being sure to apply the next lift (primer and mortar) within 24 hours.

### Application as a bonding agent for interior pedestrian traffic areas (when the material being bonded with *Planibond EBA* is not the final wear surface)

1. For ease of application, apply on a substrate with an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #1 or greater.
2. Apply the bonding agent onto the substrate with a brush, roller, broom, squeegee or trowel, working the material into the profiled substrate. Completely cover all areas of substrate that will receive the underlayment or non-wear surface screed.
3. Apply *Planibond EBA* at a thickness of 20 mils.
4. Underlayment or non-wear surface screed must be placed onto *Planibond EBA* while it is tacky to ensure a successful installation.

### Application as a bonding agent/primer with or without sand broadcast (when the material being bonded will be the final wear surface)

1. For ease of application, apply the bonding agent on a substrate with a CSP of #3 or greater.
2. Apply the bonding agent with a brush, roller, broom, squeegee or trowel, working material into the profiled substrate and back-rolling to achieve a uniform thickness. Completely cover all areas of substrate that will receive the sand broadcast, topping or repair material. Follow Steps 3 to 5 below for sand broadcast applications only.
3. Immediately after application of *Planibond EBA*, broadcast clean and dry #20 to #40 mesh sand for *Ultratop* and *Ultraplan M20 Plus* to rejection. For *Ultratop PC*, utilize a #16 mesh sand.
4. Once *Planibond EBA* has cured (for 16 to 24 hours at 75°F [24°C]), the excess sand can be removed by sweeping. Once the surface has been swept clean of all unbonded sand, run an industrial vacuum equipped with a brush over the surface to remove any debris or remaining unbonded sand.
5. Apply desired material over the prepared substrate primed with *Planibond EBA* with sand broadcasted to refusal.

## CLEANING

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

## Product Performance Properties

Laboratory Tests	Results
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 (modulus of rupture) – ASTM D790	
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 (2 hours' boiling) – ASTM D570	
7 days, total water absorption	0.4%
Flexural resistance heat deflection temperature (14 days – deflection temperature) – ASTM D648	
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)
VOCs (Rule #1113 of California's SCAQMD)	13 g per L

## Shelf Life and Product Characteristics (before mixing)

Shelf life	2 years when stored in original, unopened packaging at 73°F (23°C)
Storage	Store in dry place at 50°F and 95°F (10°C and 35°C). Protect from freezing.

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

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## Application Properties

Application temperature range	50°F to 95°F (10°C to 35°C)
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 (5,300 to 5,900 cps)

## Packaging

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

## Approximate Coverage\* (as a bonding agent)

Substrate	Coverage
Smooth surface	100 sq. ft. per U.S. gal. (2,45 m <sup>2</sup> per L)
Rough surface	50 to 75 sq. ft. per U.S. gal. (1,22 to 1,84 m <sup>2</sup> per L)

\* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

Refer to the SDS for specific data related to health and safety as well as product handling.

### LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

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**Edition Date:** May 3, 2017  
PR: 612 MKT: 17-1438