

Planibond SBA

Normal-Set, Segmental Bridge Adhesives



DESCRIPTION

Planibond® SBA epoxy bonding adhesives are two-component, 100%-solids and moisture-insensitive. Each *Planibond SBA* adhesive acts as a lubricant and sealer for match-cast precast segments used in span by span and cantilevered erection of segmented precast elements.

FEATURES AND BENEFITS

- Available for use in four temperature classes
- Create a water-resistant seal after curing
- Long working time
- Easy to apply

WHERE TO USE

- For the bonding of match-cast precast segments
- For bonding hardened concrete to hardened concrete
- As a lubricant, to aid in post-tensioning of match-cast precast segments
- For precast bridges, panels, etc.

INDUSTRY STANDARDS

- *Planibond SBA 20-45* complies with ASTM C881/C881M-15 (AASHTO M235), Type VI, Grade 3 modified between 20°F and 45°F (-6.7°C and 7°C).
- *Planibond SBA 40-65* complies with ASTM C881/C881M-15 (AASHTO M235), Type VI, Class D, Grade 3 between 40°F and 65°F (4°C and 18°C).

- *Planibond SBA 60-90* complies with ASTM C881/C881M-15 (AASHTO M235), Type VI, Class E, Grade 3 between 60°F and 90°F (16°C and 32°C).
- *Planibond SBA 75-115* complies with ASTM C881/C881M-15 (AASHTO M235), Type VI, Class F, Grade 3 between 75°F and 115°F (24°C and 46°C).

SURFACE PREPARATION

- Match-cast sections must be clean and free of dirt, paint, laitance, form oil, free moisture, dust, debris and any foreign substance that may interfere with bonding. Free moisture is determined by wiping the application area with a new clean rag; if any visible moisture on the rag is present, then application should wait until no moisture transfers to the rag.
- Ensure that the substrate is mechanically profiled utilizing engineer-approved methods to obtain a surface profile as required within project specifications or an ICRI concrete surface profile (CSP) of #3 or higher. Take care to not alter surface shape or profile of match-cast end sections.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Ensure that the proper temperature class of *Planibond SBA* adhesives is being utilized per the substrate and ambient temperature range at time of placement.
2. Each *Planibond SBA* adhesive consists of epoxy resin (Part A) and curing agent (Part B). Each unit is proportioned to equal a yield of 3 U.S. gals. (11.4 L) when mixed.
3. Premix Part A and Part B separately with a low-speed drill and appropriate mixing paddle before adding them together.
4. Add Part A first and then Part B. Mix for 3 minutes with a low-speed drill and appropriate mixing paddle. The mixed epoxy should be a streak-free, homogenous color when properly mixed.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Apply immediately after mixing.
2. Apply uniformly to a nominal thickness of 1/16" (1.5 mm) by gloved hand or with spatula to the adjoining ends of the prepared match-cast precast segments.
3. Apply the mixed *Planibond SBA* adhesive to the entire area of the adjoining faces.
4. Do not exclude application around holes formed by ducts.
5. If shims are placed as a joint, apply additional epoxy thickness, equal to the shim thickness.
6. The amount of epoxy applied may be adjusted provided that a sufficient amount is applied to completely fill all interstitial space in the joint and to extrude a small bead from the joint after application of the compressive contact pressure.
7. Use a spatula or trowel to remove excess material that squeezes out after joining, before the material hardens.
8. Always comply with design specifications for application thickness, temperature class and contact pressure for joining match-cast segments.

CLEANUP

- Clean tools and mixing equipment with a suitable solvent, such as acetone, xylene or toluene, before the material hardens. Hardened material can only be removed by mechanical means.

LIMITATIONS

- Mix only full units.
- Do not thin *Planibond SBA* adhesives with solvent or water.
- Only mix enough units as can be applied within the product's working time.
- Although the product is moisture-insensitive, do not apply it over free moisture or while it is raining (unless the application area is protected from the elements).
- Use the proper temperature class for the existing substrate and ambient temperatures.
- Ensure that each Part A and Part B is from the same class, whether Class D, E or F.

Product Performance Properties

		20°F to 45°F (-6.7°C to 7°C)	40°F to 65°F (4°C to 18°C)	60°F to 90°F (16°C to 32°C)	75°F to 115°F (24°C to 46°C)
Compressive strength – ASTM D695	24 hours	Not applicable	> 2,000 psi (13.8 MPa)	> 2,000 psi (13.8 MPa)	> 2,000 psi (13.8 MPa)
	48 hours	Not applicable	> 6,000 psi (41.4 MPa)	> 6,000 psi (41.4 MPa)	> 6,000 psi (41.4 MPa)
	7 days	> 2,500 psi (17.2 MPa)	> 9,000 psi (62.1 MPa)	> 9,000 psi (62.1 MPa)	> 9,000 psi (62.1 MPa)
Sag resistance at high temperature		Nonsag < 0.0 in.	Nonsag < 0.0 in.	Nonsag < 0.0 in.	Nonsag < 0.0 in.
Gel time at low temperature		140 minutes	160 minutes	270 minutes	120 minutes
Gel time at high temperature		52 minutes	92 minutes	120 minutes	80 minutes
Heat deflection temperature – ASTM D648	14 days	N/A	> 120°F (49°C)	> 120°F (49°C)	> 120°F (49°C)
Open contact time		60 minutes	60 minutes	60 minutes	60 minutes
Bond strength – ASTM C882	2 days	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)
Contact strength – ASTM C882	2 days	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)	> 1,000 psi (6.90 MPa)

Application Properties

	Results
Color (Part A / Part B / Mixed)	Dark gray / white / light gray
Consistency	Nonsag
Application temperature range <i>Planibond SBA 20-45*</i> <i>Planibond SBA 40-65</i> <i>Planibond SBA 60-90</i> <i>Planibond SBA 75-115</i>	20°F to 45°F (-6.7°C to 7°C) 40°F to 65°F (4°C to 18°C) 60°F to 90°F (16°C to 32°C) 75°F to 115°F (24°C to 46°C)

* Must be preconditioned to 45°F (7°C)

Shelf Life and Product Characteristics

Shelf life	2 years in original, unopened containers
Storage conditions	Must be stored in a dry place and kept at above 20°F (-6.7°C). Acclimate <i>Planibond SBA</i> to the stated temperature range for at least 24 hours before use.

CSI Division Classification

Common Work Results for Concrete	03 05 00
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Packaging

Size
<i>Planibond SBA 20-45</i> : Kit, 3 U.S. gals. (11.4 L)
<i>Planibond SBA 40-65</i> : Kit, 3 U.S. gals. (11.4 L)
<i>Planibond SBA 60-90</i> : Kit, 3 U.S. gals. (11.4 L)
<i>Planibond SBA 75-115</i> : Kit, 3 U.S. gals. (11.4 L)

Approximate Coverage**

Application Thickness	Coverage
1/8" (3 mm)	12.8 sq. ft. per U.S. gal. (1.19 m ² per 3.79 L) 38.5 sq. ft. per 3 U.S. gals. (3.58 m ² per 11.4 L)
1/4" (6 mm)	6.4 sq. ft. per U.S. gal. (0.59 m ² per 3.79 L) 19.3 sq. ft. per 3 U.S. gals. (1.79 m ² per 11.4 L)

Amount of Mixed Product	Yield
1 U.S. gal. (3.79 L)	231 cu. in. (3 785 cm ³)
3 U.S. gals. (11.4 L)	693 cu. in. (11 356 cm ³)

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

ADDITIONAL INFORMATION

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

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

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 nor 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 www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**

CONTACT INFORMATION

MAPEI Headquarters of North America

1144 East Newport Center Drive
Deerfield Beach, Florida 33442
1-888-US-MAPEI (1-888-876-2734) / (954) 246-8888

Technical Services

U.S. and Puerto Rico:

Flooring: 1-800-992-6273

Concrete and heavy construction: 1-888-365-0614

Canada:

1-800-361-9309

Customer Service

1-800-42-MAPEI (1-800-426-2734)

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For the most current product data and BEST-BACKEDSM warranty information,
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