



PLANIBOND SBA
Normal-Set, Segmental Bridge Adhesive

SECTION 03 05 00
Common Work Results for Concrete

1. GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field application for a normal-set, two-part, nonsag, 100%-solids, epoxy bonding adhesive.

1.2 RELATED SECTIONS

- A. Section 03 00 00 – Concrete

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM C881 – Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
Planibond SBA 40-65 – Type VI, Class D, Grade 3
Planibond SBA 60-90 – Type VI, Class E, Grade 3
Planibond SBA 75-115 – Type VI, Class F, Grade 3

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years' experience installing similar products.
- C. Source Limitations: For repair products, obtain each color, grade, finish, type and variety of product from single source and from single manufacturer with resources to provide products of consistent quality in appearance and physical properties.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.



1.6 PRE-INSTALLATION MEETINGS

- A. Convene at least two weeks prior to starting work of this section.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

2.PRODUCTS

2.1 MANUFACTURERS

- A. Product Performance:

Compressive Strength – ASTM D695	24 hours	> 2,000 psi (13.8 MPa)
60°F - 90°F (16°C - 32°C)	48 hours	> 6,000 psi (41.4 MPa)
	7 days	> 9,000 psi (62.1 MPa)

Gel time at low temperature	
Class D - 40°F to 65°F (4°C to 18°C)	160 minutes
Class E - 60°F to 90°F (16°C to 32°C)	270 minutes
Class F - 75°F to 115°F (24°C to 46°C)	120 minutes

Gel time at high temperature	
Class D - 40°F to 65°F (4°C to 18°C)	92 minutes
Class E - 60°F to 90°F (16°C to 32°C)	120 minutes
Class F - 75°F to 115°F (24°C to 46°C)	80 minutes

Acceptable Manufacturer:

MAPEI North America
1144 E. Newport Center Dr.; Deerfield Beach, FL 33442
Toll-Free for CRS Technical Services: Tel. 888-365-0614
Email: CRS@mapei.com
Web: www.mapei.com

- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.



- C. Substitutions: Not permitted.

2.2 NORMAL-SET, SEGMENTAL BRIDGE ADHESIVES

- A. Epoxy Bonding Adhesive: ASTM C881/C881M, bonding system.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planibond SBA.
 - 2. Type VI at bonding and sealing segmental pre-cast elements with internal tendons and span erection and where indicated.
 - 3. Bond Strength: Not less than 1,000 psi (6.90 MPa) within 2 days when tested according to ASTM D882, Class D, E and F.

2.3 MISCELLANEOUS MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I, II or III unless otherwise indicated.
- B. Water: Potable.

2.4 MIXES

- A. General: Mix products in clean containers according to manufacturer's written instructions.
 - 1. Do not add water, thinners or additives unless recommended by manufacturer.
 - 2. When practical, use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovels or trowels as units of measure.
 - 3. Do not mix more materials than can be used within time limits recommended by manufacturer. Discard materials that have begun to set.

3.EXECUTION

3.1 PREPARATION

- A. 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 is transferred 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.

3.2 MIXING

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

- A. Ensure that the proper temperature class of Planibond SBA adhesives is being utilized per the substrate and ambient temperature range at time of placement.
- B. 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.
- C. Premix Part A and Part B separately with a low-speed drill and appropriate mixing paddle before adding them together.



- D. 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, homogeneous color when properly mixed.

3.3 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Apply immediately after mixing.
- B. 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.
- C. Apply the mixed Planibond SBA adhesive to the entire area of the adjoining faces.
- D. Do not exclude application around holes formed by ducts.
- E. If shims are placed at a joint, apply additional epoxy thickness, equal to the shim thickness.
- F. Use a spatula or trowel to remove excess material that squeezes out after joining before the material hardens.
- G. Always comply with design specifications for application thickness, temperature class and contact pressure for joining cast-match segments.

3.4 CLEANUP

- A. 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.

END OF SECTION