CONCRETE SLAB RESTORATION SPECIFICATION
ATPG COATING (20 mils)

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division Specification Sections, apply to this Section.

1.2 SUMMARY

A. This section includes the following:

1. Concrete Slab Restoration System as shown on the drawings and in schedules.

1.3 SYSTEM DESCRIPTION

1. The work shall consist of preparation of the substrate, the furnishing and application of ATPG Industrial Coating system. ATPG Corporations products are proprietary coatings incorporating proprietary products and, as such, no substitute products from other manufacturers shall be accepted. The system shall have the color and texture as specified by the Owner with a nominal thickness of 20 mils. It shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.

1.4 SUBMITTALS

A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.
B. Manufacturer’s Material Safety Data Sheet (MSDS) for each product being used.
C. Samples: A 6 inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system.

1.5 QUALITY ASSURANCE

1. The Manufacturer shall have experience in the production, sales, and technical support of epoxy and related materials.

2. Applicator shall have been approved by ATPG Corporation in all phases of surface preparation and application of the product specified or hold certification from INSTALL (International Standards and Training Alliance)

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3. No requests for substitutions shall be considered that would change the generic type of the specified System.

4. A pre-installation conference shall be held between Applicator, General Contractor and the Owner for clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping

1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

1. The Applicator shall be provided with a storage area for all components. The area shall be between 60 F and 80 F, dry, out of direct sunlight and in accordance with the Manufacturer's recommendations and relevant health and safety regulations.
2. Copies of Material Safety Data Sheets (MSDS) for all components shall be kept on site for review by the Engineer or other personnel.

C. Waste Disposal

1. The Applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.7 PROJECT CONDITIONS

A. Site Requirements

1. Application may proceed while air, material and substrate temperatures are between 60 F and 90 F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
2. The relative humidity in the specific location of the application shall be less than 85 % and the surface temperature shall be at least 5 F above the dew point.
3. The Applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.

B. Conditions of new concrete to be coated with ATPG materials.

1. Concrete shall be moisture cured for a minimum of 7 days and have fully cured a minimum of twenty eight days in accordance with ACI-308 prior to the application of the coating system pending moisture tests.
2. Concrete shall have a flat rubbed finish, float or light steel trowel finish (a hard steel trowel finish is neither necessary or desirable).
3. Sealers and curing agents should not be used.
4. Concrete surfaces on grade shall have been constructed with a vapor barrier to protect against the effects of vapor transmission and possible delamination of the system.

C. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. "No Smoking" signs shall be posted at the entrances to the work area.
3. The Owner shall be responsible for the removal of foodstuffs from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

A. ATP Corporation warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to ATPG Corporation’s published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.
B. Manufacturer liability with respect to this warranty is strictly limited to the value of the material purchase.

PART 2 – PRODUCTS

2.1 ATPG Industrial Coating
A. Epoxy-Based Concrete restoration system
1 .System Materials:
a. ATPG Mastic
b. ATPG IC
2. Patch Materials
a. Shallow Fill and Patching: Use Mastic or Manufacturer approved patching material.
b. Deep Fill and Sloping Material (over ¼ inch): Use Mastic or Manufacturer approved repair mortar.

2.2 MANUFACTURER

B. Manufacturer of Approved System shall be single source and made in the USA.

2.3 PRODUCT REQUIREMENTS

A. Mastic

1.	Percent Solids	100 %
2.	VOC	0 g/L
3.	Bond Strength to Concrete ASTM D 7234	1,800 psi, substrates fails
4.	Hardness, ASTM D 2134	71
5.	Elongation, ASTM D 2370	>42 %

B. Coating

1.	Percent Solids	100 %
2.	VOC	0 g/L
3.	Tensile Strength, ASTM D 638	7,600 psi
4.	Flexural Strength, ASTM D 790	4,000 psi
5.	Permeability, ASTM 1653	0.133
6.	Potlife @ 70 F	60 minutes

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting coating performance.

1. Verify that substrates and conditions are satisfactory for coating installation and comply with requirements specified.

3.2 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing:
   a. Perform three tests for the first 1,000 sf and then one test per 1,000 sf after that.
   b. Use Commercial Moisture Meter such as Protimeter or PosiTest CMM, according to the Manufacturer's directions to evaluate substrate moisture. Readings must not exceed the values published In the ATPG Application Guide
3. There shall be no visible moisture present on the surface at the time of application of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.
4. Mechanical surface preparation
   a. Shot blast all surfaces to receive coating system with a mobile steel shot, dust recycling machine. All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes, and other similar surface characteristics shall be completely removed leaving a bare concrete surface having a minimum profile of CSP 3-4 as described by the International Concrete Repair Institute.
   b. All areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
   c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4 inch key cut shall be made to properly seat the system, providing a smooth transition between areas. The

detail cut shall also apply to drain perimeters and expansion joint edges.

d. Cracks and joints (non-moving) greater than 1/8 inch wide are to be repaired per manufacturer's recommendations.

5. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in two distinct steps as listed below:
   a. Substrate preparation
   b. Topcoat application.

2.. Immediately prior to the application of any component of the system, the surface shall be dry and any dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.

3. Applicator shall be responsible for the erecting of proper containment appropriate for the project.
4. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
5. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Architect.
6. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Coating

1. The coating shall be comprised of two components, a resin, and hardener as supplied by the Manufacturer.
2. The resin shall be added to the hardener and thoroughly mixed by suitably approved mechanical means.
4. The mixed coating shall be applied over horizontal surfaces using "v" notched squeegee and back rolled to yield a dry film thickness of 20 mils.
5. The finished concrete deck will have a nominal thickness of 20 mils.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
   a. Temperature
      1. Air, substrate temperatures and, if applicable, dew point.
   b. Coverage Rates
      1. Applied Mil Thickness shall be monitored by checking depth of material with suitable Mil Gauge