

SECTION 07182
TRAFFIC COATINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Fluid applied waterproof pedestrian traffic deck coating on concrete substrate.

1.2 RELATED SECTIONS

- A. Section 03300 – Cast-In-Place Concrete.

1.3

- A. Product Data: Submit manufacturer's product data, installation instructions and Material Safety Data Sheets (MSDS) for each product indicated.
- B. Samples:
 - 1. Submit samples of selected coating colors for approval by Architect.
 - 2. Submit 12 inch by 12 inch sample of fully cured traffic coating, prepared on rigid base indicating color and texture.
 - 3. Maintenance Manual: Submit manual.

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Manufacturer of the coating systems shall have a minimum of 5 years experience in the manufacture of fluid applied traffic coatings.
 - 2. The Applicator shall be qualified in writing by the Manufacturer and shall have a minimum of 5 years experience in installation of fluid applied traffic coatings.

1.5 DELIVERY AND STORAGE

- A. Deliver materials to jobsite in sealed, undamaged containers. Each container shall be identified with material name, date of manufacture and lot number.

1.6 ENVIRONMENTAL CONDITIONS

- A. Install coating materials under the following conditions:
 - 1. Rain is not anticipated within 8 hours of application.
 - 2. Substrate surface temperatures are above 40 deg. F. (5 deg. C.) and lower than 110 deg. F. (44 deg. C.).

3. Positive ventilation for interior applications can be continuously supplied throughout application period and 8 hours after.
 4. Open fires and spark producing equipment are not, and will not be, in application area until vapors have dissipated.
- B. Post 'No Smoking' signs in area during and for a minimum of 8 hours after application.

1.7 GUARANTEE

- A. Completed installation shall be guaranteed against defects of material and workmanship for a period of 5 years, beginning with date of substantial completion of the deck coating system

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Traffic Coating: Pacific Polymers, Inc., ELASTO-DECK™ 5000HT liquid applied, moisture-cured, polyurethane deck covering system consisting of the following:
1. Primer: Pacific Polymers, Inc., ELASTO-POXY™ Primer, two- component, solvent based epoxy primer.
 2. Base Coat: Pacific Polymers, Inc., ELASTO-DECK™ 5001HT Coating, one-part self-leveling, polyurethane coating.
 3. Top Coat: Pacific Polymers, Inc., ELASTO-GLAZE™ 6001AL HT Coating, one-part moisture-cured, aliphatic polyurethane top coat.
 4. Color: As selected by Architect.
- B. Aggregate: 20 mesh Monterey sand or as recommended by coating manufacturer.
- C. Sealant: Pacific Polymers, Inc., ELASTO-THANE™ 230, one-part self-leveling or gungrade, non-staining, polyurethane sealant .
- D. Sheet Flashing: .050" thick, precured, commercial grade neoprene or commercial grade uncoated, woven fiberglass cloth.

2.2 TECHNICAL DATA

Property	Measuring Standard and Conditions	Base Coat		Top Coat
Shore 'A' Hardness	ASTM D2240	75	95	
Ultimate Tensile Strength	ASTM D412	1500 PSI	2,800 PSI	
Ultimate Elongation	ASTM D412	400%	160%	
Adhesive Peel Strength on Concrete	ASTM D903	150 PLI	N/A	

Peel Strength on Plywood	ASTM D903	30 PLI	N/A
Crack Bridging	ASTM C2369	System Passes	System Passes
Abrasion Resistance	ASTM C501-62T30 mil DFT on 4" x 4" metal CS17 wheel, 1000 rev, 1000 gram weight	N/A	0.029
Tear Resistance	ASTM D624	260 PLI	520 PLI
Weatherometer	ASTM D1499 & G23	1,000 Hours Slight Chalking	2,000 Hours No Change
Weight per Gallon		10.65 lbs.	9.39 lbs
Viscosity at 77°F (25°C)	Brookfield Viscometer	70 poises	25 poises
Flash Point		120F	120F
Resistance to: Gasoline		Slight Swelling	Slight Swelling
Diesel Fuel		Slight Swelling	Slight Swelling
Anti-Freeze		No Effect	No Effect
Motor Oil		No Effect	No Effect
Water		No Effect	No Effect
VOC		210 gr./litre.	250 gr./litre.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and remove loose surface material, grease, oil and contaminants.
- B. Verify concrete substrate has been cured with a sodium silicate based curing compound. Refer to section 03300.
- C. Concrete surface shall be visibly dry and pass a 4 hour rubber mat test with no condensate.
 1. Mat Test:
 - a. Place a 2" x 2" (0.6m x 0.6m) non-breathing rubber or vinyl mat onto concrete substrate.
 - b. Tape mat edges to concrete substrate on all sides.
- D. Metal surfaces shall be dry, clean, free of grease, oil, dirt, rust, corrosion and contaminants.
- E. Metal surfaces shall be sound and fastened, free of void and without offsets at joints. Ensure fasteners are driven flush.

3.2 PREPARATION

- A. Clean surfaces which are to receive coating.
 - a. Remove oil and grease with a commercial grade alkaline cleaner.
- B. Prepare concrete substrate by sandblasting, shot blasting or acid etching with a 10% - 15% solution of muriatic acid. Flush acid with clean water and allow substrate to dry
- C. Sawcut cracks exceeding 1/16" (.16cm) in width and apply sealant.
- D. Apply sealant to expansion, control and construction joints.

3.3 FLASHINGS

- A. Apply sheet flashings embedded in base coat at locations where a horizontal surface abuts a vertical surface and at deck penetrations.
- B. At locations of potential high movement such as wall/slab intersections, which are not structurally and rigidly connected provide 10"(25.4 cm) min. width of sheet flashing. Where sheet flashings are used, they shall be free or unbonded to the substrate within 2" (5.08 cm) vertically and 4"(10.16 cm) on horizontal surface. Do not use precured sheet flashings over expansion joints in horizontal surfaces.
- C. At projections through deck coatings such as posts, vents, pipes, stanchions, railings and similar locations of potential slight movement, provide a 1/4" bead of sealant with woven polyester cloth embedded as recommended by coating manufacturer. Tool sealant to form a cove and allow to cure.

3.4 APPLICATION

- A. Primer: Prime concrete, masonry and metal surfaces. Allow a minimum dry time of one hour. Primer shall not be applied more than 8 hours preceding application of deck coating.
- B. Apply primer at the rate of 300 sq. ft. per gallon. Mix only enough for use over a 2-hour period (max.). Install deck coating base coat on the same day and within 4 hours following application of the primer.
- C. Apply 25-mil dry film thickness of base coat material over all flashings (sheet flashings, sealant coves and rigid corners). Extend coating 2" beyond flashing out onto adjacent deck surface. Unless otherwise indicated on Drawings or where limited by height of base, extend coating a minimum of 1" above the top of the flashing and terminate in a neat straight line. Use masking tape for such purposes.
- D. Apply 25-mil dry film thickness of base coat material over and for a distance of 1-1/2" on each side of all cracks.
- E. Apply 25-mil dry film thickness of base coat material over and for a distance of 2" on each side of expansion joints, control joints and construction joints. Joints shall be a maximum one inch in width.

- F. Base coat shall be applied to the primed concrete at a rate of 64 square feet per gallon (1.47 m²/liter) resulting in a dry film thickness of 25 mils (.6 mm). Repair thin spots and pinholes.
- G. Allow base coat to cure overnight. Apply top coat at a rate of 100 square feet per gallon (2.45 m²/liter).
- H. Immediately broadcast one gallon of aggregate uniformly into the wet coating per 100 sq. ft. Ensure that the coating is back rolled. Allow top coat to cure overnight.

3.5 CLEANING

- A. Clean stains from adjacent surfaces with approved cleaner.
- B. Remove construction barricades, debris and other items of work, including empty containers, from the Project site.
- C. Remove foreign matter from finished coating surfaces.

3.6 FIELD QUALITY CONTROL

- A. After membrane has cured, flood test area by adding water to a depth of 2 to 3 inches at outlets. Retain water at specified depth for a period of 24 hours. If leakage occurs, repair coating to the satisfaction of the Architect and retest. Ramps and horizontal surfaces with slope greater than 1 inch in 10 feet are exempt from testing requirement.

END OF SECTION