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**SECTION 07 18 16**

**VEHICULAR TRAFFIC COATINGS**

**PART 1 – GENERAL**

- 1.1 [RELATED DOCUMENTS](#)
  - 1.2 [SUMMARY](#)
  - 1.3 [PREINSTALLATION MEETINGS](#)
  - 1.4 [ACTION SUBMITTALS](#)
  - 1.5 [INFORMATIONAL SUBMITTALS](#)
  - 1.6 [QUALITY ASSURANCE](#)
  - 1.7 [WARRANTY](#)
- PART 2 – PRODUCTS**
- 2.1 [MATERIALS, GENERAL](#)
  - 2.2 [TRAFFIC COATING](#)
  - 2.3 [ACCESSORY MATERIALS](#)
- PART 3 – EXECUTION**
- 3.1 [EXAMINATION](#)
  - 3.2 [PREPARATION](#)
  - 3.3 [TERMINATIONS AND PENETRATIONS](#)
  - 3.4 [JOINT AND CRACK TREATMENT](#)
  - 3.5 [TRAFFIC-COATING APPLICATION](#)
  - 3.6 [FIELD QUALITY CONTROL](#)
  - 3.7 [PROTECTING AND CLEANING](#)

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section includes traffic coatings and pavement markings for the following applications:
  - 1. Vehicular traffic.

**1.3 PREINSTALLATION MEETINGS**

- A. Preinstallation Conference: Conduct conference at Project site.

**1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of product, including installation instructions.
- B. Shop Drawings: For traffic coatings.
  - 1. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other termination conditions.
  - 2. Include plans showing layout of pavement markings, lane separations, and defined parking spaces. Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

**1.5 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For Installer.
- B. Product Certificates: For each type of traffic coating.
- C. Sample Warranty: For special warranty.

**1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

- 1 **1.7 FIELD CONDITIONS**
- 2 A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures
- 3 recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when
- 4 temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are
- 5 less than 5 deg F above dew point.
- 6 1. Do not apply traffic coatings in snow, rain, fog, or mist, or when such weather conditions are imminent
- 7 during the application and curing period. Apply only when frost-free conditions occur throughout the
- 8 depth of substrate.
- 9 B. Do not install traffic coating until items that penetrate membrane have been installed.
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- 13 **1.8 WARRANTY**
- 14 A. Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or
- 15 workmanship within specified warranty period.
- 16 1. Failures include, but are not limited to, the following:
- 17 a. Adhesive or cohesive failures.
- 18 b. Abrasion or tearing failures.
- 19 c. Surface crazing or spalling.
- 20 d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.
- 21 2. Warranty Period: Five years from date of Substantial Completion.

22 **PART 2 - PRODUCTS**

- 23 **2.1 MATERIALS, GENERAL**
- 24 A. Material Compatibility: Provide primers; base-, intermediate-, and topcoat; and accessory materials that are
- 25 compatible with one another and with substrate under conditions of service and application, as demonstrated
- 26 by manufacturer based on testing and field experience.
- 27 B. Source Limitations:
- 28 1. Obtain traffic coatings from single source from single manufacturer.
- 29 2. Obtain primary traffic-coating materials, including primers, from traffic-coating manufacturer. Obtain
- 30 accessory materials including aggregates, sheet flashings, joint sealants, and substrate repair
- 31 materials of types and from sources recommended in writing by primary material manufacturer.
- 32 3. Obtain pavement-marking paint from single source from single manufacturer.
- 33 **2.2 TRAFFIC COATING**
- 34 A. Traffic Coating: Manufacturer's standard, traffic-bearing, seamless, high-solids-content, cold liquid-applied,
- 35 elastomeric, waterproofing membrane system with integral wearing surface for vehicular traffic; according
- 36 to ASTM C 957.
- 37 1. Traffic Coating – Car Stall:
- 38 2. Traffic Coating – Drive Lanes:
- 39 B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 40 1. Advanced Polymer Technology Corporation.
- 41 2. BASF Corporation; Construction Systems.
- 42 3. Neogard; a division of Jones-Blair, Inc.
- 43 4. Tremco Incorporated.
- 44 C. Primer: Liquid waterborne or solvent-borne primer recommended for substrate and conditions by traffic-
- 45 coating manufacturer.
- 46 1. Material: Epoxy.
- 47 D. Preparatory and Base Coats: epoxy.
- 48 1. Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate
- 49 and service conditions indicated.
- 50 E. Intermediate Coat: Polyurethane.
- 51 1. Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate
- 52 and service conditions indicated, measured excluding aggregate.
- 53 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and
- 54 service conditions indicated.
- 55 F. Topcoat: Polyurethane.

- 1 1. Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate  
2 and service conditions indicated, measured excluding aggregate.  
3 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and  
4 service conditions indicated and as required to achieve slip-resistant finish.  
5 3. Service Condition:  
6 a. Vehicle Parking Stall.  
7 b. Vehicle Drive Lane.  
8 c. Vehicle Drive Turning Lanes.  
9 d. Vehicle Drive Ramps.  
10 4. Color: As selected by Architect from manufacturer's full range.  
11 G. Aggregate: Manufacturer's standard aggregate for each use indicated of particle sizes, shape, and minimum  
12 hardness recommended in writing by traffic-coating manufacturer.  
13 H. Concrete Sealer: Floor concrete sealer at level U4.  
14 1. Silane and siloxane product chemistry developed to penetrate concrete surfaces to repel water and  
15 liquids.  
16 2. Basis of Design: Chemstop WB Regular as manufactured by Euclid Chemical Co.
- 17 **2.3 ACCESSORY MATERIALS**  
18 A. Joint Sealants: As specified in Section 07 92 00 "Joint Sealants."  
19 B. Sheet Flashing: Nonstaining sheet material recommended in writing by traffic-coating manufacturer.  
20 1. Thickness: Minimum 50 mils.  
21 C. Adhesive: Contact adhesive recommended in writing by traffic-coating manufacturer.  
22 D. Reinforcing Strip: Fiberglass mesh recommended in writing by traffic-coating manufacturer.

23 **PART 3 - EXECUTION**

24 **3.1 EXAMINATION**

- 25 A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for  
26 surface smoothness, surface moisture, and other conditions affecting performance of traffic-coating work.  
27 B. Verify that substrates are visibly dry and free of moisture.  
28 1. Test for moisture according to ASTM D 4263.  
29 2. Test for moisture content by measuring with an electronic moisture meter.  
30 C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of traffic-coating  
31 work.  
32 D. Proceed with installation only after substrate construction and penetrating work have been completed and  
33 unsatisfactory conditions have been corrected.  
34 1. Begin coating application only after minimum concrete-curing and -drying period recommended in  
35 writing by traffic-coating manufacturer has passed and after substrates are dry.  
36 2. Application of coating indicates acceptance of surfaces and conditions.

37 **3.2 PREPARATION**

- 38 A. General: Before applying traffic coatings, clean and prepare substrates according to ASTM C 1127 and  
39 manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application.  
40 Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating  
41 manufacturer.  
42 B. Schedule preparation work so dust and other contaminants from process do not fall on wet, newly coated  
43 surfaces.  
44 C. Mask adjoining surfaces not receiving traffic coatings to prevent overspray, spillage, leaking, and migration  
45 of coatings. Prevent traffic-coating materials from entering deck substrate penetrations and clogging weep  
46 holes and drains.  
47 D. Concrete Substrates: Mechanically abrade surface to a uniform profile acceptable to manufacturer,  
48 according to ASTM D 4259. Do not acid etch.  
49 1. Remove grease, oil, paints, and other penetrating contaminants from concrete.  
50 2. Remove concrete fins, ridges, and other projections.  
51 3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents,  
52 and other incompatible materials that might affect coating adhesion.  
53 4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM  
54 D 4258.

- 1 **3.3 TERMINATIONS AND PENETRATIONS**  
2 A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at  
3 expansion joints, drains, and sleeves according to ASTM C 1127 and manufacturer's written instructions.  
4 B. Provide sealant cants at penetrations and at reinforced and nonreinforced, deck-to-wall butt joints.  
5 C. Terminate edges of deck-to-deck expansion joints with preparatory base-coat strip.  
6 D. Install sheet flashings at deck-to-wall expansion and dynamic joints, and bond to deck and wall substrates  
7 according to manufacturer's written recommendations.

- 8 **3.4 JOINT AND CRACK TREATMENT**  
9 A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C 1127 and manufacturer's  
10 written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according  
11 to ASTM D 4258.  
12 1. Comply with recommendations in ASTM C 1193 for joint-sealant installation.  
13 B. Apply reinforcing strip in traffic-coating system where recommended in writing by traffic-coating  
14 manufacturer.

- 15 **3.5 TRAFFIC-COATING APPLICATION**  
16 A. Apply traffic coating according to ASTM C 1127 and manufacturer's written instructions.  
17 B. Start traffic-coating application in presence of manufacturer's technical representative.  
18 C. Verify that wet film thickness of each coat complies with requirements every 1000 sq. ft..  
19 D. Uniformly broadcast aggregate on coats specified to receive aggregate. Embed aggregate according to  
20 manufacturer's written instructions. After coat dries, sweep away excess aggregate.  
21 E. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate  
22 on vertical surfaces.  
23 F. Cure traffic coatings. Prevent contamination and damage during application and curing stages.  
24 G. Apply number of coats of specified compositions for each type of traffic coating at locations as indicated on  
25 Drawings.  
26 1. Traffic Coating – Equipment areas  
27 2. Traffic Coating – Drive Lanes:

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- 47 **3.7 PROTECTING AND CLEANING**  
48 A. Protect traffic coatings from damage and wear during remainder of construction period.  
49 B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended  
50 by manufacturer of affected construction.

51 **END OF SECTION 07 18 00**