

**SECTION 07 18 00
VEHICULAR TRAFFIC COATINGS**

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies a fluid applied elastomeric and composition waterproofing type membrane suitable for vehicular traffic use. This system shall be extended up adjacent vertical surfaces 4 inches, including walls, panels, columns, curbs, pipes, and all other vertical surfaces encountered.

1.2 RELATED WORK

A. Following work is related to this section:

1. Joint Sealants, Section 07 92 00
2. Pavement Markings, Section 32 17 23

1.3 TEST AREA

Before start of general application, apply the elastomeric coating as specified in a representative test area. The area shall be approximately 9 m² (100 square feet). The area to be covered by the coating shall include all site conditions such as flashings bases, corners and projections through the coating. Location of test area shall be determined by the COR, and after approval, shall serve as an example for the remaining work.

1.4 SUBMITTALS

- A. Manufacturers Literature and Data: Each material, indicating compliance with specification requirements.
- B. Samples: Each finish color on 100 by 200 mm (4 by 8 inch) substrate, layered to show each coat and finish.

1.5 WARRANTY

Warranty surfaces, where elastomeric coating has been applied, against leaks and other failures, over and above normal wear and failure of substrate, and subject to the terms of the "Warranty of Construction", FAR clause 52.246-21, except that the warranty period is five years.

1.6 DELIVERY AND STORAGE

- A. Deliver materials to the site in original sealed containers, clearly marked with manufacturer's name and brand, and type of material.
- B. Store materials in weathertight and dry storage facility. Protect from damage from handling, weather and construction operations before, during and after installation. Store materials at temperatures and under conditions recommended by the manufacturer.

1.7 ENVIRONMENTAL REQUIREMENTS

Do not proceed with application of materials when ambient temperature is less or greater than that recommended by the coating material manufacturer.

1.8 SAFETY REQUIREMENTS

Keep products away from heat, sparks and flame. Do not permit use of spark-producing equipment during application of flammable products or where explosive fumes are present.

1.9 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - C794-06.....Adhesion-in-Peel of Elastomeric Joint Sealants
 - D412-06.....Vulcanized Rubber and Thermoplastic Elastomers-Tension
 - D2240-05.....Rubber Property - Durometer Hardness
 - E96-05.....Water Vapor Transmission of Materials

PART 2 - PRODUCTS

2.1 DECK COATING - GENERAL

- A. Deck coating system shall be a fluid applied, waterproof, traffic bearing elastomeric membrane capable of preventing penetration of concrete by water, gasoline, oils, greases, salts, deicer chemicals, battery acids and radiator coolants.
- B. Color of deck coating shall be gray with Owner selecting shade of gray from standard color chart submittal.
- C. Material to fill in pitting, bug holes, popouts, and shallow scaling shall be in accordance with Manufacturer's written recommendations.
- D. Same Manufacturer's deck coating system shall be used throughout.
- E. Deck coating thicknesses specified herein are minimum dry film thicknesses and do not include the aggregate. Specified thicknesses may vary from Manufacturer's literature. A coat may have to be installed in more than one layer to achieve minimum thickness or on ramps a slope grade version of deck coating material shall be used. Install each coat in accordance with Manufacturer's recommended yield for required thickness.
- F. Thinner or solvent shall not be added to deck coating materials.

- G. All deck coating exposed to sunlight, including areas at perimeter of structure on lower levels, shall utilize a UV stable topcoat.

2.2 PRIMER

Type required by the elastomeric coating manufacturer.

2.3 ELASTOMERIC BASE, INTERMEDIATE, AND TOP COAT

Elastomeric base, intermediate, and top coat materials shall meet or exceed the following requirements:

Property	Test Method	Base Coat	Top Coat
Tensile Strength	ASTM D412	300 pounds per square inch	600 pounds per square inch
Elongation	ASTM D412	550 percent	200 percent
Hardness, Shore A	ASTM D2240	20	45
Peel Strength (on concrete)	ASTM C794	30 pounds, 100 percent cohesion	100 percent cohesion to base coat
Permeability	ASTM E96	12 metric perms	0.06 metric perms

- A. Primer: Liquid water or solvent based primer recommended for substrate and conditions by traffic-coating manufacturer.
- B. Preparatory and Base Coats: Polyurethane.
1. Thicknesses: 25 mil, Minimum dry film thickness.
- C. Intermediate Coats: Polyurethane.
1. Thicknesses: 25 mil, Minimum dry film thickness, measured excluding aggregate.
 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and service conditions indicated.
- D. Topcoat: Polyurethane.
1. Thicknesses: 12 mil, Minimum dry film thickness, measured excluding aggregate.
 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and service conditions indicated.

2.4 AGGREGATE

- A. Thoroughly washed, clean, medium grained sharp indigenous stone granules, graded between 1mm and 4mm in size, and having a hardness of 6.5 or greater on the Moh's scale.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Surfaces shall be shot blast prepared and deck coating installed in strict accordance to the Basis of Design Manufacturer's installation requirements.
- B. Surfaces to be coated shall be clean and dry. Smooth rough spots and tool marks.
- C. Fill holes, depressions and cracks with fillers compatible with the coating material and recommended by the coating manufacturer.
- D. Subsurface imperfections that telegraph through the finish coating surface shall not be accepted.

3.2 WORK COORDINATION

To provide a watertight installation, coordinate this work with flashing and drains required to be installed before the coating work begins and be completed after the coating is in place.

3.3 APPLICATION

- A. Prime all surfaces to receive elastomeric waterproofing materials as recommended by the products manufacturer.
- B. Where horizontal surfaces intersect vertical surfaces provide a sealant type fillet as recommended by the manufacturers.
- C. Apply elastomeric base coat at a rate that shall ensure a dry film thickness of not less than 25 mils.
- D. Apply elastomeric intermediate coat at a rate that shall ensure a dry film thickness of not less than 25 mils
- E. Uniformly disperse aggregate topping at the rate of 0.5 Kg per m² (10 lbs/100 sq. ft.); inter-bond and vulcanize granules within the fluid elastomeric topping in accordance with manufacturer's instructions.
- F. Apply elastomeric top coat at a rate which shall ensure a dry film thickness of 12 mils for the top coat and a total combined dry film thickness for the base and top coats of not less than 50 mils.
- G. Complete the base to a uniform established line as shown.

3.4 CLEANING

Remove smears of elastomeric material from other work.

3.5 PROTECTION

Protect the finished coating from traffic until the coating cures.

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