

SECTION 09 06 91
SUBGRADE SERVICE CONCRETE COATING

PART 1 - GENERAL

1.1 DESCRIPTION

Provide all materials, tools, labor, scaffolding and miscellaneous other items necessary to clean, and paint the exterior surfaces of precast concrete structures for subgrade service. Paint only the surfaces called for on the plans and or specified herein.

1.2 SCOPE OF WORK

1.2.1 Areas to be painted shall be the exterior surfaces of precast concrete structures to be exposed to earth.

1.2.2 If noted on the plans or called for elsewhere in the specifications additional masonry surfaces exposed to earth may be coated as specified herein.

1.3 SUBMITTALS

Submit the manufacturer's product data sheet for each coating to be used. Indicate the site location where the product is to be used and the items to be coated.

1.4 QUALITY ASSURANCE

1.4.1 Work shall be performed by skilled workmen thoroughly trained in necessary crafts and completely familiar with the specific requirements, reference standards, and methods specified herein.

1.4.2 There shall be at least one painter or foreman, fluent and literate, in the English language, on site anytime surface preparation or coating work is performed.

1.4.3 Materials for any one coating application shall be of a single manufacturer.

1.4.4 The contractor shall maintain a daily log of painting activities throughout the project. Entries into the log shall be: date, air temperature, humidity, substrate temperature, weather conditions, location and nature of work, and total number of workers. Upon request, the contractor shall produce the log for the engineer's inspection.

1.4.5 There shall be a mandatory meeting of representatives of the prime contractor, coating subcontractor, engineer, and owner, prior to any surface preparation or paint application. The purpose of the meeting shall be to review the items to be coated, the types of surface preparation and coating to be used and the location of areas to

be used as quality control samples.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

1.5.1 Deliver materials in factory-sealed containers with manufacturer's labels intact and legible. Containers without legible labels shall be removed from the project site. All containers shall be subject to inspection by the engineer.

1.5.2 Paint and related materials and equipment shall be stored in a lockable metal storage container, trailer, or other securable structure. The container or trailer shall be at a suitable location on the project site away from work areas and other storage areas.

1.5.3 Store materials at a temperature between 35°F and 110°F . Materials stored at temperatures below 50°F shall be warmed to 50°F before use.

1.5.4 Paint, thinner, and other materials not approved for use on this project may not be stored on the job site.

1.6 JOB CONDITIONS

1.6.1 Apply coatings only with the engineer's prior approval, when prevailing weather conditions permit. The air and substrate surface temperatures may not be below 45°F or above 120°F. The relative humidity may not be above 85 percent. Follow the manufacturer's recommendations if more stringent than those indicated above.

1.6.2 The Contractor shall cover or otherwise protect the finished work of other trades, surfaces not being coated concurrently, and/or surfaces, which are not to be painted. Any injury or damage to such surfaces shall be remedied to the satisfaction of the Owner at the expense of the Contractor before final acceptance, and no separate payment will be made.

1.7 REFERENCE STANDARDS

1.7.1 Steel Structures Painting Council Surface Preparation Standards (SSPC)

1.7.2 American Society for Testing Materials (ASTM)

1.7.3 American Water Works Association (AWWA)

1.7.4 National Association of Corrosion Engineers (NACE)

1.8 RELATED SPECIFICATIONS

1.8.1 SECTION 03400 - PRECAST CONCRETE STRUCTURES

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- 2.1.1 Products specified herein are manufactured by the CARBOLINE Company of St. Louis, Missouri, or the TNEMEC Company Inc., Kansas City, Missouri, and are specified as standards of quality, not necessarily as a brand preference. Equivalent materials of other manufacturers may be acceptable.
- 2.1.2 Materials used shall be first line products of the manufacturers specified. Manufacturer's catalogue numbers are provided for the purpose of identifying each item.

2.2 PAINT SCHEDULE

Exterior of Concrete Precast Structures: Note that two manufactures are listed but only one manufacturer shall be selected.

Carboline Bitumastic 50: Two Coats 8.0 to 10.0 mils per coat.

Tnemec H. B. Tnemecol 46-465: Two Coats 8.0 to 10.0 mils per coat.

Total Required Film Thickness: 16 to 20 mils. No additional payment will be made for extra coats required to meet the required film thickness.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

The Contractor shall examine the surfaces scheduled to receive coating. Protrusions such as form burrs, sharp edges, fins and concrete spatter shall be removed. Voids and other defects at or near the surface shall be exposed and repaired. After the surface has been repaired it shall be cleaned so that no dirt, oil, grease or other contaminates that might impede adhesion of the coating is removed. The resulting surface shall be clean, dry, and have a texture with a profile not less than that of 80 grit sand paper. The concrete shall have had a minimum curing time of 28 day cure.

3.2 APPLICATION CONDITIONS

Apply coatings only when the air and surface temperatures are greater than 45° F and less than 120° F, the relative humidity is not above 85 percent and the surface temperature is at least 5 degrees Fahrenheit above the dew point. Follow manufacturer's recommendations regarding application conditions if more stringent than listed above. Protect all surfaces not to be coated.

3.3 APPLICATION

Apply coatings smoothly uniform in thickness free of bubbles, runs, skipped, or missed areas. Application method shall be in accordance with the manufacturer's recommendations.

3.4 CLEAN UP

The Contractor shall cleanup at the end of each day's work. Trash may be kept on site for final disposal at the project's completion provided it is kept out of view and generates no offensive odors or habitat for unwanted wildlife. Upon completion, the contractor shall remove all rubbish, containers, rags and other waste materials from the site and properly dispose of them. The site shall be left in a clean condition, acceptable to the Owner. The Contractor shall adhere to all federal, state and local regulations regarding the disposal of paint containers, paint, paint contaminated rags, and other hazardous materials associated with application of paint.

****END OF SECTION****