

ITEM 10595.20 M - PROTECTIVE NON-SLIP MEMBRANE COATING

DESCRIPTION

Under this item, the Contractor shall furnish and apply a protective non-slip membrane coating to the top surface of new concrete platforms and access stair treads as indicated on the Contract drawings.

MATERIALS

The product shall consist of a semi-flexible, 100% solvent free material that shall be applied in liquid form and shall form a protective, waterproof, non-slip membrane over the concrete surface.

The product shall be monolithically colored to match sidewalk. The color shall be subject to the approval of Long Island Railroad and the Engineer.

The product integrity, color and bond to the substrate shall not deteriorate in any way over a period of at least ten (10) years as a result of exposure to sunlight, rain, snow or ice, normal airborne contaminants, salt, and cleaning detergents.

The product shall require a two-part mixing process. After mixing the materials, the product shall cure to sufficient strength to resist pedestrian traffic in not more than four hours when applied at 20 deg.C. Application temperature range shall be at least 5 deg.C to 30 deg.C.

At least two coats of the product shall be applied to form a total thickness of at least 1.5 mm. The product shall form a sound, cohesive bond to the substrate and subsequent coats shall form a monolithic bond to each other.

The product shall not produce toxic fumes prior, during or after the mixing and application process.

The minimum dry static coefficient of friction when applied to a smooth surface, as defined by ASTM Test Method D-2047-82, shall be 0.80.

All materials individually or mixed shall have zero volatile organic content (V.O.C.) and shall be non-hazardous and Class A Fire Rated.

The product shall not adversely affect, or be affected by other components on the platform.

CONSTRUCTION DETAILS

Pre-work inspection:

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Examine all surfaces to be covered with the membrane material products and report to the Engineer any conditions which will adversely affect the performance of the product system and that cannot be put into acceptable condition by surface preparation work described below.

Do not proceed with installation until the surface is acceptable and authorization to proceed is given by the Engineer.

Surface Preparation:

All concrete surfaces to receive the product shall be mechanically blast cleaned using a mobile shot blast machine with dust recycling, or a waterblast machine capable of producing minimum water pressure of 40 MPa, so as to remove the laitance layer on the concrete surface. The intent is to form a sound surface that will permit a cohesive bond between the substrate and the product.

The cleaned concrete surface surfaces, and all adjacent areas that may have been impacted by dust or other debris, shall be cleaned/vacuumed to the satisfaction of the Engineer. If, in the opinion of the Engineer, the surface has become soiled or contaminated prior to the first or subsequent coats, it shall be cleaned again to the satisfaction of the Engineer at no additional cost to NYSDOT.

The Contractor shall protect adjacent surfaces not to be covered with the product with masking and/or covers.

Concrete surfaces may be damp to a dull gray but with no standing water prior to application of the coating system.

The Contractor shall request acceptance of surface preparation from the Engineer before application.

Product Application:

Material shall be brushed, rolled or sprayed onto prepared substrate. The application system shall meet all the requirements of the manufacturer and Engineer, shall not cause toxic fumes and shall meet all regulations of local, state and federal authorities having jurisdiction.

Application Coats:

1. Membrane Coat: Apply .75 mm minimum thickness over the entire surface. Control thickness by covering a Manufacturer predetermined area with each unit quantity. Allow to cure for period in accordance with Manufacturers recommendations before application of traffic coat.

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2. Traffic Coat: Apply .75 mm minimum thickness over the entire surface. Control thickness by covering a Manufacturer predetermined area with each unit quantity. Allow to cure for period in accordance with Manufacturers recommendations before opening to traffic.

Under no circumstances will any product be allowed to run into drains, manholes or other openings.

Actual degree of cure and suitability for traffic on the product surface shall be determined by the Installer with agreement by the Engineer.

Application of the product shall be completed and curing time exceeded, before any water or other contamination of the surface occurs.

The Contractor shall remove any product spatters and product that is not where it should be. Remove masking and covers taking care not to contaminate the surrounding area.

The Contractor shall repair any damage that should arise either from the installation or clean-up effort.

All work not acceptable to the Engineer must be corrected before consideration of final acceptance.

SUBMITTALS

Samples: Provide two samples applied to 300 mm x 300 mm plywood or similar base, of surface texture and color to be achieved. Complete ranges of color samples shall be submitted for selection by Long Island Railroad and the Engineer.

Submit copies of manufacturer's literature for all products furnished, including appropriate Material Safety Data (MSD) Sheets.

Upon completion of work specified in this Section, submit three Maintenance Manuals for the specified product. Include all product data and MSD Sheets. Include instructions for periodic inspections, care and maintenance. Identify common causes of damage and failure with instructions for repair.

METHOD OF MEASUREMENT

Protective Non-Slip Membrane Coating shall be measured by the square meter.

BASIS OF PAYMENT

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Payment for Protective Non-Slip Membrane Coating will be for the total area in square meters, measured in place. Payment shall be full compensation for all mechanical surface preparation, cleaning, furnishing all materials, labor, tools, equipment, and all other necessary items to complete the specified work.