

ITEM 601.03----09 - INTEGRALLY COLORED HOT APPLIED TEXTURED POLYMER WEARING SURFACE - COARSE AGGREGATE TYPE F2 CONDITIONS

DESCRIPTION

Construct architectural pavement treatments for use under vehicle traffic as shown on the contract documents.

MATERIALS

Hot applied polymer binder and natural aggregate system, approved by the Materials Bureau. Final surface must provide an initial minimum friction value of 50 BPN.

Binder:

- Designed specifically for use as a textured wearing surface for traffic conditions.
- Integrally colored as to achieve a final product meeting the color requirements of the contract.
- Provide a firm bond to concrete or asphalt.
- Provide a durable surface and texture which will not deform under traffic.

Aggregates:

Coarse Aggregates: Section 401-2.02 B. Coarse Aggregate Type F2 Conditions.

Gradation: 100% passing the 12.5 mm sieve

Submit aggregate samples to the Materials Bureau for approval 45 days prior to use.

Additional quality assurance samples will be retrieved during installation and submitted for testing at a minimum rate of 1 sample per 100m², or as ordered by the Engineer.

Fine Aggregates: Silica sand as recommended by the pavement treatment manufacturer. Submit aggregate samples to the Materials Bureau for approval 45 days prior to use.

Use silica sand as a topping material at an application rate of approximately 50kg per 50 square meters of surface area.

Silica sand gradation requirements:

Sieve Size	Percent Passing
850 μm	100
600 μm	40-100
300 μm	1-3
150 μm	0 - 0.3

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CONSTRUCTION DETAILS

Construct according to manufacturer's recommendations, using licensed or certified applicators and/or a manufacturer's representative on site during placement.

Apply a manufacturer's recommended primer if required.

Place the pavement treatment at the thickness shown in the contract documents. Interfaces with adjacent surfaces shall be flush, providing smooth transition from surface to surface. If the pavement treatment is placed over existing pavement, construct 20mm deep by 150mm wide keyways at all edges. Cut the installation boundaries prior to excavating the existing material. All surfaces must be dried and cleaned by use of mechanical sweepers, high pressure air or other methods approved by the Engineer prior to use. Surfaces must be free of all dirt, oil, debris and any other material that might interfere with the bond between the pavement treatment and existing surfaces.

Use a hot compressed air lance (HCA) on existing surfaces immediately prior to application of the pavement treatment, to remove any remaining dust and promote good adhesion to the substrate. Use masking tape or other suitable material to protect the area adjacent to the installation. Install grade control devices to ensure the required thickness of the pavement treatment is installed. The method and material used for grade control must be pre-approved by the Engineer.

Heat the pavement treatment in accordance with manufacturer's recommendations using a thermostatically controlled pre-heater capable of continuous material agitation. Heating of the pavement treatment by direct flame is not allowed. Only use heating equipment that has been approved by the Engineer.

Temperature Requirements:

- Preheat the pavement treatment between 190°C-215°C.
- Silica sand must be completely dried before application to ensure proper adhesion to the material. A hot compressed air lance may be used to thoroughly dry and preheat the silica sand.
- Do not place material when the ambient air temperature is below 4°C.
- Surface temperature must be 0°C minimum.
- Do not place material if the Engineer determines atmospheric conditions may compromise the surface treatment performance.

Apply, uniformly spread and smooth out the material between the grade control forms utilizing hot irons as recommended by the manufacturer. Apply preheated sand after the material has been smoothed out and before texturing.

Surface Texture (if required): Texture the semi molten material immediately after the sand application using an approved mold capable of providing a 6mm ± 2mm deep and wide imprint in accordance with the design details shown on the plans. Use a

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manufacturer approved release agent to prevent the pavement treatment from sticking to the mold.

METHOD OF MEASUREMENT

This work shall be measured as the number of square meters of material necessary to construct architectural treatments as shown in the contract documents, or as ordered by the Engineer.

BASIS OF PAYMENT

The unit price bid per square meter shall include the cost of all training, labor, materials, equipment and clean up necessary to complete the work.

DISAPPROVED - EI 12-005