

**ITEM 601.02----09 - INTEGRALLY COLORED HOT APPLIED SYNTHETIC ASPHALT WEARING SURFACE - COARSE AGGREGATE TYPE F2 CONDITIONS**

**DESCRIPTION**

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

**MATERIALS**

Use Grade 45 Imprint<sup>®</sup>, a hot applied polymer modified synthetic asphalt compound wearing course produced by Prismo Limited, or an approved equal as determined by the Regional Materials Engineer (RME). The Imprint material incorporates pigment, graded rubber granules, granite aggregates and reinforcing fibers. The integral color and stamped (molded) pattern shall be as indicated on the plans using material available from Imprint<sup>®</sup> or a RME approved equal.

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**Aggregates:**

**Coarse Aggregates:** The wearing course aggregates must meet the requirements of Standard Specifications Section 703-Aggregates and Section 401-2.02 B. Coarse Aggregate Type F2 Conditions. Aggregate samples shall be submitted 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 100m<sup>2</sup>, or as ordered by the Engineer. The coarse aggregates gradation shall be such that 100% passes the 12.5 mm sieve.

**Fine Aggregates:** Standard Specifications Section 703-01 shall apply except as modified herein. Use silica sand as a topping material at an application rate of approximately 50kg per 50 square meters of surface area. When dry, the silica sand shall meet the following gradation requirements:

Sieve Size	Percent Passing
850 $\mu\text{m}$	100
600 $\mu\text{m}$	40-100
300 $\mu\text{m}$	1-3
150 $\mu\text{m}$	0 - 0.3

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### **CONSTRUCTION DETAILS**

Using manufacturer certified installers Place surface treatment in accordance with the manufacturer's recommended methods at the thicknesses and details as shown in the contract documents. Interfaces with adjacent surfaces shall be flush, providing smooth transition from surface to surface. If material is placed over existing pavement, construct 20mm deep by 150mm wide keyways at all edges. Sawcut 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 resurfacing material and existing surfaces.

Use a hot compressed air lance (HCA) immediately prior to application 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 Imprint is installed. The method and material used for grade control must be pre-approved by the Engineer in Charge.

Heat the materials in accordance with manufacturer's recommendations using a thermostatically controlled pre-heater capable of continuous material agitation. Only use heating equipment that has been approved by the Engineer.

### **Temperature Requirements:**

- Imprint materials shall be preheated between 190°C-215°C.
- Silica sand must be completely dried before application to ensure proper adhesion to the Imprint material. A hot compressed air lance may be used to thoroughly dry and preheat the silica sand.
- Material shall not be placed when the ambient air temperature is below 4°C.
- Material shall not be placed 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 printing. If required, a roughened surface texture can be achieved by using wooden floats versus a hot iron finish.

**Imprinted Design (if required):** Imprint the semi molten material immediately after the sand application using an approved mold capable of providing a 8mm ± 2mm deep imprint in accordance with the design details shown on the plans. Use a manufacturer approved release agent to prevent Imprint material 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 labor, materials and equipment necessary to complete the work.