Slope Paving Crushed Aggregate Special Item SPV.0180.xx.

**A**  **Description**

This special provision describes furnishing, crushing, and placing aggregate for slope paving; and application of an epoxy resin binder with the aggregate per the applicable provisions of standard spec 604.

**B Materials**

**B.1** **General**

The epoxy resin binder shall be a low modulus, medium-viscosity, two-component epoxy resin.

Furnish evidence, to the satisfaction of the engineer, that the proposed product has been successfully used in a similar application.

Epoxy resin binder shall be clear to light amber when fully cured.

Crushed aggregate shall be native Wisconsin limestone with hues of tan, amber and gray. Crushed aggregate shall have 100% fractured faces.

Crushed aggregate shall conform to the following nominal requirements:

|  |  |
| --- | --- |
| Sieve Size | Percent by Weight Passing |
| 4-Inch | 100 |
| 1-Inch | 0-25 |

**B.2 Minimum Requirements.**

The epoxy resin binder shall conform to ASTM C881 and AASHTO M235 specifications and the following requirements:

* Total water absorption, ASTM D570

 7 day, 1.3% (2 hour boil)

 14 day, 0.232% (24 hour immersion)

 Viscosity: 2,500 cps

**C. Construction**

**C.1 Application**

The binder shall be applied per the manufacturer's directions, uniformly over the surface of the paving at a rate sufficient to assure penetration and binding of the particles in the upper 2 inches of the aggregate blanket. Application of the binder shall take place utilizing a two part sprayer with mixing completed at the nozzle.

Apply and mix epoxy resin binder under dry conditions only. Do not apply if rain is expected within 8 hours following epoxy resin application to crushed aggregate.

Air and surface temperature should be between 50 and 90 degrees Fahrenheit during and for 24 hours following application and mixing of the epoxy resin binder.

Protect installed crushed aggregate with epoxy resin binder from excessive dust exposure for the first 4 hours of curing.

**C.2** **Test Section**

Prior to placing slope paving, prepare a test section utilizing the proposed aggregate and epoxy resin binder so the engineer will be able to assess the adequacy of the product and the application and mixing methods to yield the desired results. Test section to be 3 feet x 3 feet and a minimum of 4-inches thick. Notify the engineer no less than 24 hours in advance of preparing the test section to allow him time to arrange for witnessing the epoxy resin binder application and mixing with the aggregate. Test section shall be allowed to cure per the product manufacturer’s requirements before the engineer will accept the product for use on the final structures.

If the test section is not accepted, prepare another test section and repeat the process, using either a different aggregate or epoxy resin binder. Repeat this procedure until the engineer accepts the test section. Use the same aggregate and epoxy resin binder means and methods when installing the product under each structure that were used in preparing the accepted test section.

**D Measurement**

The department will measure Slope Paving Crushed Aggregate Special by the square yard in place acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0180.xx | Slope Paving Crushed Aggregate Special | SY |

Payment for Slope Paving Crushed Aggregate Special is full compensation for furnishing, crushing and placing crushed aggregate; for furnishing, mixing and applying the epoxy resin binder to the aggregate; for preparing the subsurface; for cleaning any splatter of epoxy resin binder to adjacent pavement or structures; and for making and disposing of the test section.