

suitable dynamic testing machine. The samples shall be allowed to cure at room temperature  $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  ( $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$ ) for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated test.

m. Compressive Resistance: When tested according to ASTM D 695, a catalyzed epoxy pavement marking materials shall have a compressive strength of not less than 83,000 kPa (12,000 psi). The cast sample shall be conditioned at room temperature  $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  ( $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$ ) for a minimum of 72 hours before performing the indicated test. The rate of compression for these samples shall be no more than 6 mm (1/4 inch) per minute.

n. Abrasion Resistance: The abrasion resistance shall be evaluated on a Taber Abrader with a 1.0 kg (2.2 pounds) load and CS-17 wheels. The duration of the test shall be 1,000 cycles. The wear index shall be calculated based on ASTM C 501 and the wear index for a catalyzed material shall not be more than 100 mg (0.02 pounds). The test shall be run on cured samples of materials which have been applied at a film thickness of 0.5 mm (20 mil) to code S-16 stainless steel plates. The samples shall be allowed to cure at  $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  ( $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$ ) for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated test.

o. Impact Strength:

(1) Sample preparation: Properly mixed material shall be applied on a minimum of 28 days old clean concrete and shall be allowed to cure for 72 hours at  $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  ( $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$ ). Film thickness of the material shall be at the appropriately prescribed thickness.

(2) Testing: At a temperature of  $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  ( $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$ ), a 0.9 kg (2 pound) round steel ball shall be dropped from a height of 1,200 mm (48 inches) on the cured sample. No cracking or chipping of the material shall take place.

p. Color: The mixed epoxy compound, both white and yellow, shall be applied to 2 sets of 76 mm x 152 mm (3 inches x 6 inches) aluminum panels at 0.5 mm ( $20 \pm 1$  mil) in thickness, one set with no glass beads and one set with glass beads (must ensure 50/50 distribution of Size I and Size II beads for this will impact the results of the test). Expose the prepared samples in a Q.U.V. Environmental Testing Chamber, as described in ASTM G 53, and they shall conform to the following requirements in alternating cycles:

The test shall be conducted for 75 hours at  $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ), 4 hours humidity and 4 hours U.V., in alternating cycles. The prepared panels shall be cured at  $25^{\circ}\text{C}$  ( $77^{\circ}\text{F}$ ) for 72 hours prior to exposure.

The color of the white epoxy material shall not be darker than the Federal Standard No. 595A-17855. The color of the yellow epoxy polymer material shall be same as Federal Standard No. 595A-13415.

q. Certificate of compliance: The material manufacturer shall furnish a notarized certification that the material complies with the provisions of this specification. It shall not be inferred that the provisions of a certification of compliance waives state inspection, sampling, or testing.

r. Laboratory samples: Promptly after execution of the contract, the Contractor shall notify the Engineer of the sources of material he expects to use. The material manufacturer shall furnish samples of the epoxy materials as may be required by the Engineer, a minimum of ten days before the date of intended use of these materials.

s. Infrared spectra: A copy of the infrared spectra of each component on each lot number shall be supplied by the manufacturer along with the certification papers. This infrared spectra will be on record with the Department to serve as a quality control measure for the future supply of this system to the State.

t. Manufacturer Qualifications : The manufacturer must have expertise and performance history including: Must have completed and passed the service test in accordance with Supplement 1047; verifiable installations; ample production capacity; proper facility; compliance with EPA regulations ; verifiable quality control program; in Ohio must have passed a minimum of 4 years of performance (durability and retroreflectivity) on concrete or asphalt surface.

u. Qualifying contractor: The Contractor shall demonstrate an ability to satisfactorily apply the material in the presence of the Engineer at a mutually agreed upon location, before commencement of the work. A previous statement of demonstrated ability to apply this material issued by any ODOT district will suffice as evidence of qualification.

**828.03 Glass Beads.** In addition to the requirements of 740.10, the following shall apply:

Glass bead packaging shall clearly indicate EPOXY - SIZE I or EPOXY SIZE II.

Inspection shall be done at the project site. Random samples shall be obtained from material delivered to the project site, or at other locations designated by the Laboratory.

The glass beads shall have the following gradation when tested in accordance with ASTM D 1214.