

Alabama Standard Specifications, 2012 Edition, are hereby amended as follows (this includes the addition of NEW SECTION 404):

SECTION 404 PAVEMENT SURFACING (SCRUB SEAL)

404G-001

404.01 Description.

This Section covers the placement of a bituminous pavement surfacing that is composed of an application of a polymer modified asphalt rejuvenating scrub seal.

404.02 Materials.

(a) EMULSION.

The emulsion shall be a CMS-1P for rejuvenating scrub seal meeting the requirements in Table

1.

Table 1 -Property	Method	Specification
Test on Emulsion		
Viscosity @77 (SFS)	ASTM D244	50 - 350
Residue, w%, minimum.	ASTM D244	67
pH	ASTM E70	2.0-5.0
Sieve, w%, max.	ASTM D244	0.1
Oil distillate, w%, max.	ASTM D244	0.5
Test on Residue⁽¹⁾		
Viscosity @ 140°F, P, maximum.	ASTM D2170	3000
Penetration @ 39.2°F, minimum.	ASTM D5	40
Elastic Recovery on residue by distillation, % minimum.	AASHTO T59, T301 ^(1,2)	50
Test on Latex:		
Tensile strength, die C dumbbell, psi, minimum	ASTM D412 ⁽³⁾	500
Swelling in rejuvenating agent, % maximum; 48 hours exposure @ 104°F	ASTM D471 ⁽³⁾ Modified	40% intact film
Test on rejuvenating agent:		
Flash point, COC, °F	ASTM D92	> 380
Hot Mix Recycling Agent Classification	ASTM D4552	See Section II

⁽¹⁾ Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350° F plus or minus 10° F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 plus or minus 5 minutes from first application of heat.

⁽²⁾ Elastic Recovery @ 10° C (50° F): Hour glass sides, pull 20 cm, hold 5 minutes then cut, let sit 1 hour.

⁽³⁾ Tensile Strength Determination: Samples for testing for tensile strength in accordance with ASTM D412 shall be cut using a die dumbbell at a crosshead speed of 20 in/min.

4. ROLLERS.

Two pneumatic tire rollers shall be used to seat the aggregate into the emulsion. The rollers shall be self-propelled. The minimum total weight of each roller shall be 5 tons.

5. AGGREGATE REMOVAL EQUIPMENT.

A mechanically powered pick-broom shall be furnished with a vacuum for the removal of excess aggregate.

(e) MATERIAL APPLICATION.

The emulsion broom shall be pulled behind the emulsion distributor immediately after the application of the emulsion. All cracks in the pavement shall be filled by emulsion by the movement of the weighted emulsion broom through the emulsion.

The aggregate shall be dry during spreading. The aggregate shall be evenly spread over the scrubbed emulsion.

The seal should be rolled immediately after the aggregate is applied. There shall be at least three passes made with a pneumatic roller.

The pavement surfacing system shall be stiff enough to allow sweeping up excess aggregate without damage to the pavement surface. The excess aggregate shall be removed with the vacuum broom within two hours of rolling or as directed by the Engineer.

The roadway shall not be opened to traffic until at least two hours after the completion of the placement of the emulsion and aggregate. The Engineer may require a second power sweeping to remove any loose aggregate. Excess aggregate shall be removed from the project unless otherwise approved by the Engineer.

For innerlayer applications the scrub seal shall be sufficiently cured prior to placing a bituminous overlay, micro-surfacing, or other asphalt surface treatments. The work shall be staged such that any seal coat inner-layer placed shall be covered by the succeeding surface treatment within 72 hours. The status of being cured shall be determined by the ability to sweep all loose aggregate from the surface without removing any aggregate adhered to the bituminous emulsion.

(f) SAMPLING.

A minimum of one daily sample of the aggregate will be taken from the application vehicle and tested for gradation. If the average test results vary from the gradation requirements, production shall stop. The Contractor shall identify the cause and document in detail what corrective action was taken. Documentation of the corrective action shall be furnished to the Engineer before placement will be allowed.

(g) ACCEPTANCE.

The Contractor shall be responsible for the maintenance of the surface treatment until the work is accepted by the Engineer. Damage or loss of aggregate in the surface exceeding 2 % of the surface area in any 500 foot long section shall be repaired by use of additional emulsion and aggregate. All bleeding (excess asphalt) surfaces shall be covered with additional concrete sand in such a manner that the asphaltic material will not adhere to, or be picked up by the wheels of vehicles.

If in the Engineer's judgment, defective areas warrant removal, the Contractor shall remove and replace those areas at the Contractor's expense with materials meeting specification requirements.

404.04 Method of Measurement.

The pavement surfacing will be measured in units of square yards.

404.05 Basis of Payment.**(a) UNIT PRICE COVERAGE.**

The unit price of the pavement surfacing shall be full compensation for all materials, equipment, tools, and labor required for furnishing and placing the pavement surfacing, and for post-sweeping.

(b) PAYMENT WILL BE MADE UNDER ITEM NO.:

404-G Pavement Surfacing (*) - per square yard

* Scrub Seal, etc.