



# NCDOT Pavement Preservation Bulletin

## Materials and Tests Unit

### Scrub Seals 101

#### In This Issue

- ↳ **What is a Scrub Seal?**
- ↳ **Where can I use Scrub Seal?**
- ↳ **Can we fund a Scrub Seal?**
- ↳ **Division 13 Scrub Seal**
- ↳ **What Emulsion do we use?**

#### What is a Scrub Seal?

A type of Chip Seal where a special emulsion (CMS-1PC) is scrubbed into pavement cracks via a trailer broom.

#### Has a Scrub Seal been done before in NC?

**Yes!** Our first Scrub Seal was performed in October 2025 in Buncombe County by Emery SealCo.

#### Where should I use a Scrub Seal?

Scrub Seal can be **utilized as a traditional chip seal**, with a Fog Seal on top, **or as a crack-mitigating interlayer beneath Hot-Mixed Asphalt or Micro Surfacing**. Ideal pavement conditions for a Scrub Seal include moderate cracking, oxidation, and lower traffic volumes.

**Pictured Below:** Scrub Seal paving in Buncombe County.

**Pictured Below:** CMS-1PC Emulsion before the application of stone.





## How do I fund Scrub Seal in my Division?

Scrub Seal is an eligible treatment for **Pavement Preservation funding**. A Scrub Seal is a similar unit cost to a Double Chip Seal. We have written a Scrub Seal Project Special Provision in conjunction with industry and it is ready for inclusion in a contract. **Contact us (info at the bottom) to discuss a potential Scrub Seal project.**

Pictured Above: Scrub Seal Trailer Broom apparatus.

## What were the details of the D13 project?

Emery Sealco performed a demo of a Scrub Seal with CMS-1PC emulsion made by Associated Asphalt on two routes in Buncombe County. Both routes exhibited moderate to severe cracking. One route got a Scrub Seal and Fog Seal, the other got a Scrub Seal interlayer beneath a surface lift of Hot Mix Asphalt.

Pictured Below: Completed Scrub Seal, Fog Seal and paint striping on Division 13 Buncombe County Project.



Pictured Above: Aggregate being applied to Scrub Seal emulsion to complete the Chip Seal in Buncombe County.



## What is CMS-1PC emulsion?

CMS-1PC is an abbreviation for a: Cationic, Medium-Setting, Lower Viscosity, Polymer Modified, Rejuvenating Emulsion. Compared to our CRS-2L Chip Seal emulsion, this product cures a bit slower and has **polymer and rejuvenating components**, ideal for sealing cracks.

## Pavement Preservation Team Contact Info

**Garrett Lee, PE**

NCDOT Pavement Preservation Engineer

919-329-4206

glllee@ncdot.gov



**David Spainhour, PE**

Project Engineer

336-978-0930

ext-dwspainhour1@ncdot.gov



**Mark Elkins**

Transportation Tech V

828-778-4504

ext-maelkins@ncdot.gov

