



ERGON

Asphalt & Emulsions

SUCCESS STORY

Trackless High-Performance Fog Seal Improves Aggregate Retention in Texas

CHALLENGE

Improve aggregate retention, prevent raveling, extend service life

SOLUTION

eFog HP high-performance fog seal application over chip sealed/seal coated surfaces



LOCATION

Austin, Texas;
Demo in Onion
Creek Subdivision



DISTRESS

Raveling



TRAFFIC

Residential



AGENCY

City of Austin



CONTRACTOR

Lone Star Paving



SUPPLIERS

Ergon Asphalt &
Emulsions
(eFog HP)

Background

The City of Austin has an extensive chip seal program in place to help maintain their roadway network, which is approximately 8,000 lane miles. In past years, the City noticed aggregate loss was becoming a common occurrence three to four years following new chip seal applications.

Challenge

They needed a solution that would help lock down aggregate, prevent raveling, enhance surface friction and durability, and ultimately extend the service life of these chip sealed surfaces, mainly in residential areas.

The first step to improving chip seal performance on the City's streets was identifying the reasons for the problem. Ergon Asphalt & Emulsions' Cody Chambliss was instrumental in helping to identify application issues and then educate the City on best practices for better chip seal results. He also introduced the City to a solution to help improve aggregate retention even on perfectly constructed chip seals – eFog HP high-performance fog seal.

eFog HP locks in aggregate on chip sealed surfaces. Its trackless properties provide an additional benefit on roadways in residential areas, as it helps prevent material from being tracked onto driveways. Along with performance qualities, an eFog HP application results in a dark pavement look similar to new hot mix that makes striping more visible and that stakeholders prefer.

"The City of Austin utilizes eFog HP as a cost-effective preservation treatment that extends the life of our pavements while also adding the benefit of preventing raveling on segments that were previously seal coated," said Tyler Steinbarger, City of Austin Program Manager III.

So, how did this high-performance fog seal earn City approval for improving chip seal performance?

Application Highlights

To test the effectiveness of eFog HP, including its trackless properties, the City agreed to trial applications in the Onion Creek Subdivision in Austin, Texas, in August of 2021. This would be the first time this emulsion was applied within the City's network.

Although the City has an in-house chip sealing crew, Lone Star Paving was selected as the contractor for this project. In a two-week application, Lone Star applied the eFog HP emulsion at an average rate of 0.13 – 0.15 gallons per square yard throughout the subdivision. The treatment supported a return to traffic in 40 to 45 minutes.

Note that in Texas, the terms chip seal and seal coat are used interchangeably.

Results

The City was pleased with the aesthetics and performance of eFog HP in the subdivision. Additionally, its trackless feature reduced citizen complaints about product in their driveways.

The City has since applied eFog HP over chip sealed surfaces in more areas throughout their network. They have found improved aggregate retention has reduced construction time for new chip



seal projects. Prior to eFog HP, in-house crews would typically have to spend time sweeping excess chip seal aggregate following application. However, training on best chip seal practices, coupled with eFog HP's ability to keep aggregate in place, has reduced the amount of excess aggregate post chip seal application.

Cost Savings

At \$0.25 per square yard, eFog HP has resulted in significant cost savings for the City of Austin. Alternative methods like resealing or applying micro surfacing treatments would cost \$4 - \$6 per square yard.

Long-Term Strategy

The City plans to apply the high-performance fog seal to 100 - 130 lane miles annually on new chip seals, as well as chip sealed surfaces that are four to five years old, to prevent raveling/further raveling, slow deterioration and extend service life up to four years before additional maintenance is needed.



In addition to high-performance fog seal, Ergon offers conventional and rejuvenating fog seal emulsions. Contact one of our expert team members to find out which of these fog seal solutions is the right treatment for your roadway today.

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