



PORESHIELD™ (SME-PS) PREVENTS HIGHWAY DETERIORATION

Concrete Durability Revolutionized

Contact the Indiana Soybean Alliance for more information.

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PORESHIELD™ (SME-PS) PREVENTS HIGHWAY DETERIORATION

10-Year Field Results in Local Infrastructure

Details	
Location:	U.S. Hwy 231 in Lafayette, Indiana
Date:	Applied 2011
Application Type:	Pavement Joint Application – Existing Pavement
Applicators:	Indiana Department of Transportation, Purdue University



Project Overview

In 2011, the Indiana Department of Transportation and Purdue University launched a study to evaluate the effectiveness of a new soy-based concrete protection product developed by the university. This was the first of many real-world studies to test this new concrete durability enhancer called PoreShield™ (SME-PS). They selected a heavily traveled and heavily de-iced section of U.S. Highway 231 in Lafayette, Ind. with 13-year-old pavement joints as the test subject.

Six slab joints were treated with PoreShield while the other joints went untreated. Additionally, previous methods, including backer rods and silicone, were removed. However, these previous methods were left in place for the surrounding joint areas as an additional point-of-comparison. Application was quick and easy, using a backpack sprayer. And because it is a low VOC product, protective gear was not needed. After three hours, the highway was reopened to traffic.



SME-PS



UNTREATED



ROD & SILICONE

10-Year Field Results in Local Infrastructure

Now in its 10th year, the results are remarkable. Sections treated with PoreShield look virtually the same as the day it had been applied. The control sections, including the surrounding joint areas with rods and silicone, are showing signs of significant deterioration and will likely need replacement soon.

The results from this first real-world test of PoreShield help to prove that the roadways of our states and cities can be protected for the long haul. Minimizing repair and replacement costs. And getting the lifecycle from concrete projects that you should expect.

What Is PoreShield™?

PoreShield (SME-PS) is not a penetrating sealer. It is a revolutionary **CONCRETE DURABILITY ENHANCER**. With one application (liquid or admixture), PoreShield protects concrete from premature deterioration and corrosion for 10+ years. PoreShield is a non-hazardous, high performance and cost-effective technology that protects all densities of new/old, vertical/horizontal concrete.

PoreShield extends the service of concrete five-to-nine times longer by protecting concrete from damage that begins on the inside, caused by water, salt, deicing and freeze/thaw conditions. Because PoreShield can be applied topically, it is often compared to penetrating sealers. However, it performs very differently.

- It is a long-term durability enhancer that is absorbed deep into the pores.
- It does not undergo a chemical reaction or solidify.
- It remains fluid and does not leave any film on the surface.
- It creates a flexible, self-sealing, hydrophobic barrier that is both preventative and curative.
 - Defends concrete from moisture ingress
 - Blocks ion transfer into concrete: Ca, Cl, Mg, etc.
 - Arrests Calcium Oxychloride and ASR (Alkali-Silica Reaction) deterioration
- It is a durability enhancer when applied in admixtures as well, showing dramatic reductions in fluid absorption with little negative influence on the set time, strength or shrinkage.

PoreShield is a sustainable and cost-effective investment. It is high performance, non-toxic to human health and the environment, and has earned the USDA BioPreferred® seal due to its renewable soy-derived technology. The low VOC of PoreShield (43.3 g/L) meets national standards for EPA VOC, as well as CARB, SCAQMD, OTC and AIM. The nontoxic profile of PoreShield means no PPE or specialized training is required.