



Onyx[®]

Frictional Mastic
Surface Treatment

Engineered for high speed
pavement maintenance

ingevity

Opening the road to innovation

Why Onyx®?

Onyx frictional mastic surface treatment combines the durability you want from a pavement maintenance application with the frictional characteristics achieved from improving micro texture on the pavement surface.

Onyx is a mixture of asphalt emulsion, increased levels of angular fine aggregates, polymers and catalysts. Onyx is designed to protect your investment, minimize future maintenance treatments and get traffic back on your pavement more quickly.



Friction

Onyx has been designed with an increased level of high quality fine aggregate material. The design procedure relies on industry standard testing and allows you to feel comfortable with the frictional characteristics of Onyx.

Speed to Open

Onyx frictional mastic surface treatment has been engineered to develop early strength. Using Onyx minimizes the often unseen cost of downtime with predictable dry times and faster application resulting in rapid return to traffic.

Engineered Toughness

Onyx is a central plant manufactured technology that is applied without dilution. This manufacturing method allows for increased quality control and quality assurance. Additionally, Onyx has significantly higher loadings of unique polymers and catalysts that deliver the long-term performance you demand.

Onyx is formulated to maximize your asphalt's durability through permeability, friction and color. Although containing higher aggregate loadings, Onyx consistently achieves results superior to the competition in the Wet Track Abrasion Test.



Onyx® backed by science, proven in the field



Project Facts

Road Owner

Missouri Department of Transportation (MoDOT)
Central District

Scope of Project

RT 134: 5.5 miles from RT 42 to Lake Ozark State Park near Osage Beach
RT 42: 33 miles from Iberia to Osage Beach at Lake of the Ozarks

Material

Onyx® Frictional Mastic Surface Treatment

Equipment Used

FD-3000 Distributor

Case study profile

Rt. 134 in Camden & Miller Counties, Missouri

Rt. 42 in Maries, Miller, & Osage Counties, Missouri

Route 42 is a main connector for visitors to the Lake of the Ozarks. Route 42 connects to the Ozark State Park road, also a high profile route that includes the entrance to Lee C. Fine Memorial Airport. The Department was seeking an aesthetic and economical treatment to preserve the pavement with minimal traffic interruption. With these goals in mind, Onyx frictional mastic surface treatment was seen as a rapid drying application for this high traffic and high visibility location

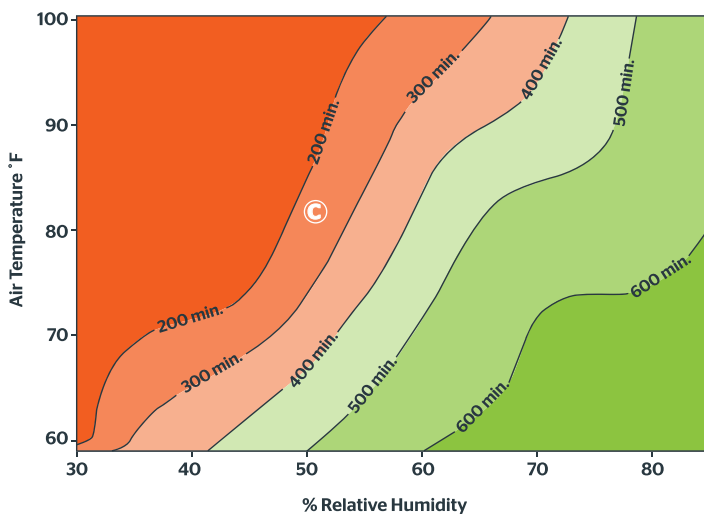
Due to excessive rain in the Ozarks throughout June, work was started, but then delayed. Once the application resumed, the job was completed quickly, even with the challenges the weather presented. Bruce Green, MoDOT's Project Manager stated "The Department's reduction in budget was a key factor in the selection of Onyx as the pavement treatment, and we are pleased with the final result of the application."

Drying Characteristics of Onyx®

The charts below indicate estimated drying times given the illustrated environmental conditions. The equation illustrates how dry times change along with conditions.

Onyx® - R1: a specially formulated frictional mastic surface treatment with high polymer and aggregate content to enhance durability and frictional characteristics. Intended for use on roadway applications.

Dry Time Onyx - R1 vs. Air Temperature °F & % Relative Humidity



Dry Time Correction Factors

Wind MPH	Wind Factor in Drying Time
1	100%
5	30%
10	20%
15	15%
20	10%

Pavement °F above Air Temp °F	Pavement °F Drying Factor
0° F	100%
10° F	75%
20° F	50%
30° F	25%

Chart times should be adjusted for steady wind (mph) and pavement temperature conditions.

© example @ 80° F, 50% RH with 5 mph wind and 100° F pavement, then Dry Time Estimate = 250 x 30% x 50% = 38 minutes