



CREATE SUSTAINABLE PAVEMENTS WITH

GSB-88

A Gilsonite-Based High Performance Sealer Binder!

WHY PRESERVE PAVEMENTS?

ARE YOU SPENDING MORE AND MORE MONEY TO KEEP ROADS IN GOOD USABLE CONDITION?

Did you know that FHWA data shows average pavement service life before reconstruction activity is only 8.5 years? Consider this, up to 80% of pavement flexibility has escaped in just five short years and the aging process has gained enough momentum to cause significant irreversible damage! Before you realize it your pavement network is in need of a (cash) infusion just to keep it safe and usable. You should be asking, "How do I postpone or delay this from happening to my asphalt pavements?" Our reply; "Preserve the binder immediately, before the damage occurs!"

PRESERVATION ADDRESSES THE REAL PROBLEM AND CURBS SKYROCKETING COSTS!

Why? The problem is two-fold. In the last 25 years, the demand for asphalt binders has simultaneously increased with the demand for pricey chemicals fractioned from crude during the refining process including adhesive-epoxy's, anti-oxidants, polymers, and ultraviolet inhibitors. This drives up the cost for the base material AND the quality of highly refined binders significantly decreases. However, GSB-88 skips this process entirely! In GSB-88, vital chemicals that affect binder strength and long-term performance remain intact to become a superior preservation alternative to sustain streets, roadways and highways, airports, and commercial pavements.

CHARACTERISTICS OF GSB-88

- Proven superior preservation product – World wide.
- **Awarded the Nation's First Environmental Product Declaration (EPD).**
- Longer Life Cycle, Lower Cost.
- No use of crude-oil cracking processes typical of all HMA (hot mix asphalt) binders.
- Penetrates into the matrix to become part of the surface while sealing and binding aggregates tightly together.
- Minimizes closure / downtime.
- Maintains pavement elasticity.
- Highly resistant to the detrimental effects caused by exposure to the environment.
- **Made from Gilsonite, a naturally occurring 99.85% pure mineral asphalt ore.**

“ We wanted to try something besides the ss1h asphalt emulsions we had used in the past to keep aggregates bound in place on the shoulders, prevent raveling, and keep newly placed asphalt in a "like new" condition.

In 2002 we tried GSB-88. Years later aggregates were still bound tightly in place on our shoulder project and in the new asphalt pavements that were treated...

GSB-88 was applied to asphalt overlay projects having ADT (average daily traffic) ranging from 300 to 2600 vehicles.

Our plans are to continue using GSB-88 for our fog seal asphalt preservation applications. ”

– Allen Horak, District Maintenance Superintendent, Nebraska Department of Roads



GSB-88 significantly postpones water damage to milled-in grooves without compromise to pavement design.

Untreated vs. GSB-88 treated test area. GSB fills voids while improving strength and appearance.

Years Later: Significant unraveling in untreated pavement, aggregates still tightly bound in GSB test area.

WHAT IS GSB-88?

GSB-88 Sealer Binder incorporates Gilsonite, a unique natural hydrocarbon high in asphaltenes and nitrogen compounds, fully compatible with bitumen.

All seal coats are not the same! During thermal expansion and contraction cycles GSB-88 expands and moves at the same rate as asphalt pavement because Gilsonite IS asphalt cement! GSB-88 retains EVERY vital component; polar compounds, maltenes and asphaltenes. While modern highly refined "fractioned" binders may meet specifications, because vital components have been removed, they experience more rapid oxidation and degradation – even when compared to binders from just a few years ago!

Unlike coal tar, chip seals, and slurry coatings, GSB-88 penetrates and becomes part of the surface of asphalt, sealing and binding aggregates tightly together (like penetrating processes used to stain wood).

GSB-88 performance is not tied to friction wear or traffic volume. GSB-88 applications require simple preparations with minimal down time. Frequently GSB-88 treated pavements are opened just a few hours after closure!

Preserving pavement flexibility with GSB-88 improves the performance of an asphalt pavement by extending the time of load carrying ability and places GSB-88 in the forefront as a performance treatment for all pavement types including streets, roadways, highways, airport runways, and all commercial pavements.

GSB-88 AWARDED EPD

No other asphalt product or seal coat has undergone this high level of testing!

Submitted to a rigorous internationally accepted Life Cycle Assessment (LCA), GSB-88 received high scores in every category. If utilized globally, GSB-88 could save 1.2 million metric tons of CO2 emissions per year and billions of dollars in savings.

– ASI (Asphalt Systems Inc.)
(Research data available by request)

WHAT ARE THE COST-SAVING BENEFITS?

While HMA pavements perform poorly when they become hard (like cement), GSB-88 maintains elasticity and integrity by keeping asphalt binders soft, pliable and flexible. When GSB-88 made from Gilsonite resin is applied to the surface of asphalt pavement it maintains oils, resiliency, and flexibility. **The use of Gilsonite lowers viscosity by over 30%, increases ductility by 30%, and increases Marshall Stability by almost 40% (strength of binder) after just five years.** Contrary to many engineers' belief, GSB does NOT harden pavements. However, GSB DOES toughen the surface to better withstand traffic and the aging process. The stability of GSB-fortified pavements makes them more resistant to problems, such as rutting and shoving, and extends the pavement's load carrying ability. In some cases GSB will halt, and reverse the effects of aging and degradation from water penetration, oxidation, and UV radiation. In addition, other benefits include increased resistance to water stripping, oxidation and the aging process.

WHEN SHOULD I APPLY GSB AND HOW OFTEN?

Because asphalt binders oxidize very quickly, sooner is better than later. According to FHWA studies preservation treatments like GSB-88 should be applied early – directly after new pavement installation or within the first years – to preserve the original oils and resins within the pavement to maintain flexibility. Benefits are most significant when applied to pavements that are structurally sound.

WHAT IS THE COST?

GSB-88 applications are one of the most cost-effective, economical treatments on the market! Recent FHWA, FAA, NAVFAC, MDOT, and AzDOT research shows agencies reduce pavement replacement costs by up to 60% compared to using the worst first-practices. We'll help you survey and inventory your pavements and develop a strategy that will work for you and your budget! **Call today for a free consultation and cost estimate and we will help you establish your asphalt preservation program today!**

For More Information Call:

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