



Asphalt-Rubber SAM is a stress absorbing membrane type surface treatment which creates a highly durable wearing surface for demanding pavements. The innovative surface treatment consists of hot pre-coated 3/8" to 1/2" aggregate placed over a thick (0.45 to 0.6 gallons per yd²) hot-applied crumb rubber modified asphalt (CRMA).



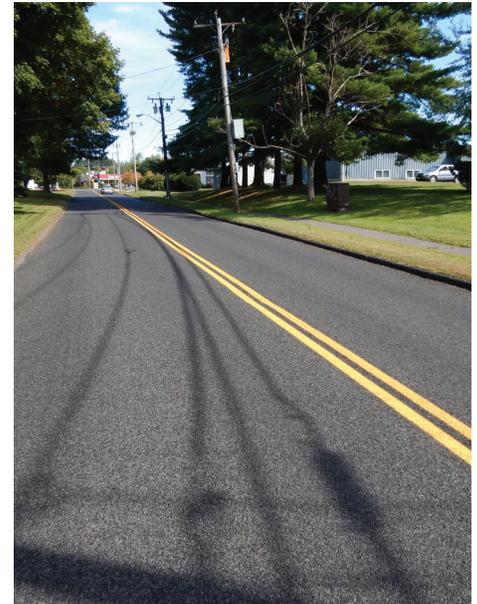
The CRMA is composed of performance graded asphalt blended with ground rubber from recycled tires and meets the ASTM Specification D-6114 for Asphalt-Rubber Binder. The tire rubber is finely ground at ambient temperatures then blended with asphalt at temperatures exceeding 350° F. The high temperature causes the oils in the asphalt to swell the elastomeric rubber polymer, resulting in a durable, elastic and flexible binder material that is less sensitive to brittleness at low temperatures and bleeding at high temperatures. The tire rubber also contributes polymer, carbon black and anti-oxidants. The result is a very adhesive and cohesive high viscosity binder that provides high film thickness on the aggregates, improving durability and resistance to oxidative aging, aggregate loss and delamination.

Asphalt-Rubber SAM Benefits

- ✓ Waterproofs and seals small cracks and imperfections on the existing pavement surface
- ✓ Minimizes loss of curb reveal and alignment; thinner than hot mix overlays
- ✓ Uses recycled material, reduces scrap tire inventories
- ✓ More durable than conventional hot mix overlays
- ✓ Developed for higher traffic volume roads
- ✓ Quick construction and traffic return with minimal user delays
- ✓ Long lasting preventive maintenance preserves the value of your structurally sound pavements with distressed surfaces

Asphalt-Rubber SAM Uses

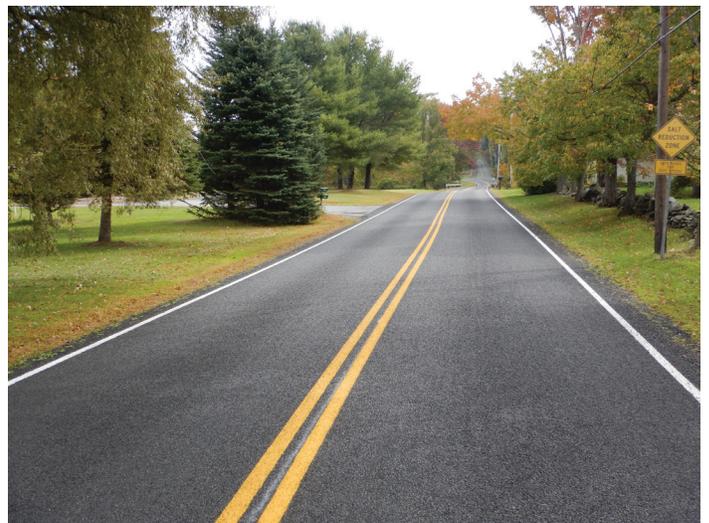
Asphalt-Rubber SAM is designed for demanding, higher traffic roadways; but they may be used on any type of road where a higher performance surface treatment is desired. They are ideal for cracked and raveled surfaces where traffic delays, curb reveal, and clearances under bridges and overpasses are a concern.



The quick return to traffic and ability to sweep the surface immediately after the treatment also offer a positive benefit in locations where traffic concerns exist.

The pavement to be sealed should be structurally sound and properly drained. It should have a good profile, but may have aged asphalt with moderate surface cracking and raveling. When warranted, potholes and cracks should be filled. The surface should be swept of any stones, sand, mud or other loose debris.

The Asphalt-Rubber SAM durability outperforms conventional hot mix overlays and nearly doubles the life of chip seals. Additionally, the capability to seal the pavement and greatly reduce reflective cracking and the propagation of new cracks make the treatment an extremely cost-effective option over the lifetime of the road surface.



What is an Asphalt-Rubber SAM?

An Asphalt-Rubber SAM (stress absorbing membrane) is a high performance type of chip seal surface treatment that seals and preserves the existing pavement surface.

The process utilizes a crumb rubber modified liquid asphalt and treated stone to create a more durable and versatile surface treatment compared to traditional chip seals.

Asphalt-Rubber SAM Process



1) Cleaning of the existing roadway surface to remove dirt and debris.



2) Spray application of crumb rubber modified asphalt to existing road.



3) Immediate covering with heated and pre-treated cover aggregate.



4) Rolling of the surface to assure embedment of the cover aggregate.



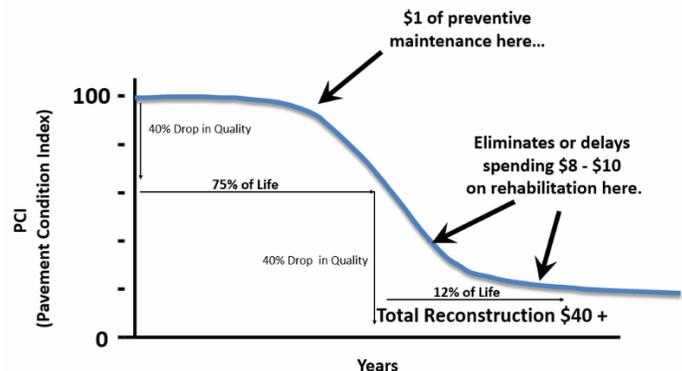
5) Immediate same-day sweeping to remove excess stone from the roadway.

What is Pavement Preservation?

Pavement preservation is utilizing cost-effective pavement maintenance techniques to treat roads before they begin to deteriorate to the point of costly repair or rehabilitation.

Similar to performing routine maintenance on a vehicle or a house, it has been shown that performing more frequent, less expensive treatments on roadways eliminates or greatly delays the need for expensive work in the future (as is shown in the chart below). The overall result is a significantly lower cost over the lifetime of a road.

Life of Pavement



More information on Pavement Preservation is available from the following organizations:



National Center for Pavement Preservation

<http://www.pavementpreservation.org>



FP2: For Pavement Preservation

<http://www.fp2.org>

Benefits of Asphalt-Rubber SAMs

Asphalt-Rubber SAMs surface treatments offer numerous benefits as a preventative maintenance process.

Treatment Performance

- Waterproofs and seals small cracks and imperfections on the existing pavement.
- Creates a flexible layer that is highly resistant to cracking.
- Increases skid resistance, greatly improving wet weather and winter weather traction.
- Protects underlying pavement from traffic wear and damage.

Construction Process

- Quick construction process minimizes user delays and reduces the time that equipment is on the roads.
- Thin profile eliminates the need for milling, adjusting of structures, raising of curbs and adjusting driveway transitions.
- Utilizes scrap tire rubber, recycling an average of over 1,300 tires per mile.

Cost Savings

- Stretches maintenance dollars due to lower overall project costs.
- Delays or prevents future costly repairs and road rehabilitation.
- Allows for more miles of roadway to be treated compared to HMA paving.

Treatment	Cost Per Mile
Shim and Overlay	\$110,000
Asphalt Rubber SAM	\$68,000
<i>*Based on current pricing and 22 ft. wide roads</i>	

Commonly Asked Questions

Will roads treated with an Asphalt-Rubber SAM look and feel the same as paved roads?

No. Like chip seals, an Asphalt-Rubber SAM is not a paved process and will have a rougher surface texture, especially immediately after the treatment. The roads will smooth out over time as vehicles drive on them, and they will eventually look and feel similar to a paved road.

Will there be loose stones on the road?

Briefly. Unlike traditional chip seals, the Asphalt-Rubber SAM is swept the same day immediately after placement of the treatment.

Can I drive on freshly treated roads?

Yes. Roads treated with an Asphalt-Rubber SAM can be driven on as soon as they are rolled. Drivers should use caution and reduce their speed if driving on the treated surface in the brief time before it has been swept.

How do you decide which roads to treat with an Asphalt-Rubber SAM and which roads to pave?

Every year the town evaluates the condition of the pavement on all of the roads and decides on the best treatments based on conditions and available funding.

Why are you working on roads in good condition instead of fixing the bad roads?

The goal of the town is to extend the overall life of our road network. By keeping our good roads in good condition and avoiding expensive repairs, we can improve the overall condition of the entire network. The town will continue to repair poor quality and unsafe roads within our overall network plan and budget.