

EVERYTHING ASPHALT

Surface Rejuvenating



"Rejuvenators will retard the loss of surface fines and reduce the formation of additional cracks."

WSDOT

Bringing Aging Pavements Back to Life

The oxidative aging of pavements begins during the construction process and continues throughout a pavement's life. The most severe aging occurs within the first two to four years of service life. Ultraviolet light from the sun, water and the environment causes surface age hardening with the top of the pavement becoming more brittle than the underlying material. While the hardening of the asphalt and the micro-cracks may not be visible, the damage is beginning and can result in raveling and/or premature cracking originating at the pavement surface.



Pavement rejuvenators are sprayed on existing aged or oxidized HMA pavements in order to restore pavement surface flexibility and to retard cracking and raveling. Emulsified sealers, binders and rejuvenators are used to protect oxidized asphalt surfaces and rejuvenate them. Rejuvenators are formulated with oils to penetrate into the pavement and then enhance the properties of the asphalt binder of the existing pavement. The chemistry of the rejuvenators is designed to replenish the oily fraction of the asphalt.

Surface Rejuvenator Benefits

- The surface rejuvenator renews aged asphalt pavements that have become dry and brittle.
- The seal prevents raveling and surface cracking.
- The low viscosity material flows into cracks and surface voids.
- Surface rejuvenators are an inexpensive treatment to prolong pavement life and delay major maintenance or reconstruction.

The Process

The emulsified rejuvenators are typically diluted with water (1:1 to 2:1) for better control of dispersion on the pavement. The emulsion is sprayed onto the surface with a properly calibrated distributor trucks. The emulsion shot rate should be determined by the surface conditions. A test section representative of the entire surface should be chosen to approximate application rates. Typical application rates for diluted emulsion range from 0.03 to 0.22 gal/yd² depending on the surface conditions. The surface rejuvenator application generally lowers the pavement surface friction, so pavements should be carefully selected, and over-application of the product avoided. Sanding the surface helps minimize the friction reduction. Traffic should be controlled by a pilot car until the sealed pavement reaches a pre-determined friction. The rejuvenators are most effective when applied at predetermined intervals (typically every 2-5 years) over the life of the pavement.

Martin Asphalt Products for Surface Rejuvenation

ARA-1	Anionic emulsified rejuvenator oil
ETR-1	Cationic emulsified rejuvenator oil

Martin Asphalt Makes It Easy

Through Martin Asphalt, you get **Everything Asphalt**—a full range of products for constructing, maintaining, recycling and rehabilitating your pavements. In addition, you receive technical assistance in selecting the right materials and application. The company's AASHTO Certified Laboratory makes sure the products meet your specifications. And your products are delivered both on spec and on time via Martin's Gulf Coast network of production plants, storage facilities and transportation fleet including ocean-going and inland barges, rail cars and tanker trucks. Contact us for more information on products for your stabilization projects.

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