

PROPERTY MANAGERS



HILLTOP PAVING

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SEALER DIVISION L L C



APPRECIATE YOUR ASSETS™



REJUVA SEAL®

REJUVA SEAL®

Successful property managers of corporate facilities, shopping plazas, apartment complexes, colleges, universities, luxury hotels, and just about any type of facility, large or small, realize that the property requires regular maintenance. Protecting the owner's substantial investment, maximizing its lifespan and enhancing its appearance applies not only to the buildings on the property, but also to the asphalt surfaces. Poorly maintained asphalt pavement makes a terrible first impression on customers, tenants and visitors, and is incredibly expensive to repair or replace if allowed to deteriorate.

Periodic maintenance can dramatically improve the durability and lifespan of your asphalt assets. RejuvaSeal®, a revolutionary, three-in-one asphalt rejuvenator, seals, protects and revitalizes asphalt pavement. Unlike water-based sealcoats, RejuvaSeal® penetrates the asphalt to rejuvenate and protect the asphalt by replacing oils lost to oxidation. As an effective treatment that is fuel, water and chemical resistant, RejuvaSeal® is the most cost-effective solution to extend the life of your asphalt, improve its appearance and enhance curb appeal.



INTRODUCTION TO ASPHALT

Starting out as a dense, dark liquid, asphalt is made of rock, sand and oils. The rock and sand give strength, while the oils, as the liquid components, provide flexibility. Asphalt pavement is designed to flex as the ground moves, yet remain solid and strong enough to withstand the weight of traffic.

Proper and timely maintenance is the key to protecting asphalt from the external factors that cause deterioration.



Untreated asphalt pavement deteriorates quickly due to the oxidation of its oils. Soon after installation and continuing over time, chemical exposure and natural elements (sun, heat, UV rays, rain, cold snow, gas, oil, etc.) cause the asphalt to dry out, losing its flexible properties. As the dry asphalt contracts from this exposure, moisture and air penetrate the pavement

causing further damage, resulting in a faded, cracked pavement, which in turn allows exposure from these harmful elements at deeper levels and so the cycle goes. Eventually, the untreated asphalt pavement deteriorates to the point of losing structural integrity.

Factors that cause deterioration in pavement include:



Water

Over time, and especially without proper maintenance, water penetrates the asphalt, washes away the underlying base, causing cracks, break-down and eventual collapse.



Sunlight

Oxidation breaks down and dries out the once flexible liquid asphalt that holds the aggregate together. This causes raveling and shrinking cracks, which allows water to penetrate beneath the surface.



Chemical / Petroleum

The introduction of chemicals, including gas and oil, to the asphalt results in a softened material that breaks down more rapidly.



WHAT ARE ASPHALT REJUVENATORS AND HOW DO THEY WORK?

Asphalt Rejuvenators...

- Restore proper balance between the asphaltene (hard) and maltene (soft) components of the asphalt
- Restore ductility (flexibility) while reducing viscosity (brittleness) to the top portion of old, brittle pavement
- Stop raveling and stripping of the aggregate
- Ensure road markings and striping remain visible
- Seal the surface against intrusion of air and water
- Used on a periodic basis, can extend the useful life of asphalt pavement indefinitely

Asphalt rejuvenation is a preventative maintenance process involving the restoration of the asphalt pavement binder to a near newly manufactured condition. The rejuvenation process is based on the measurable parameters of viscosity, penetration, ductility, asphalt content, skid resistance, and durability.

An asphalt rejuvenator penetrates the asphalt to chemically revitalize and protect the asphalt binder by replacing the tars and oils lost due to oxidation. The process also seals the pavement against air and water, thereby slowing oxidation, which extends the effective service life of the pavement.

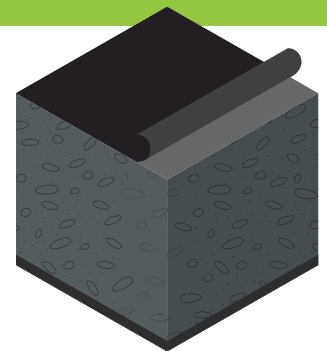
SEALERS VS. REJUVASEAL® MORE THAN A VISUAL DIFFERENCE

Traditional sealcoats merely coat the surface and do nothing to repair or protect the asphalt. The sealer adheres to the top of the pavement, much like paint, and does not expand and contract at the same rate as the asphalt. This eventually leads to cracking, pin-holing and delamination. Sealers are no more than a 'band-aid' over cracks in the pavement.

RejuvaSeal® is designed to penetrate the asphalt surface, much like a stain, and revitalize the asphalt binder while sealing the surface against contaminants such as fuel, water and chemicals. RejuvaSeal® is durable. During thermal cycles, it contracts and expands at the same rate as the asphalt, so it will not peel, chip, or delaminate. When RejuvaSeal® penetrates the pavement, and replaces oils lost by oxidation, it increases the distance the asphalt will stretch without breaking.

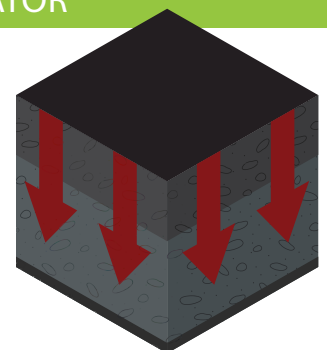
SEALCOAT

Simply coats the surface and wears away. It is subject to cracking and delamination. This is comparable to a "painted" surface that over time would peel and chip.



ASPHALT REJUVENATOR

Penetrates and seals the asphalt pavement, while restoring flexibility. It will not delaminate. This can be compared to a stained wood as an example.





Other differences between Traditional Sealcoats and RejuvaSeal® include...

Traditional Sealcoat:

- Needs sand added to mix for traction
- Required additives alter material mixture – water
- Usually requires two applications for best results
- Accumulates buildup – leads to more cracking
- Unevenly wears off surface
- Contains no rejuvenating oils - shown to dry out the pavement faster when compared with untreated pavement
- Provides no healing properties for asphalt enhancement

RejuvaSeal®:

- Needs no sand added to mix -- unnecessary
- No water added to alter material mix
- One step application
- No buildup of material – penetrates into the surface
- Ages uniformly – looks great after years of use
- Chemically rejuvenates asphalt binder that extends asphalt life up to four years per application (as shown by independent test data)
- Stops raveling
- Three Year Performance Warranty



PREVENTIVE MAINTENANCE

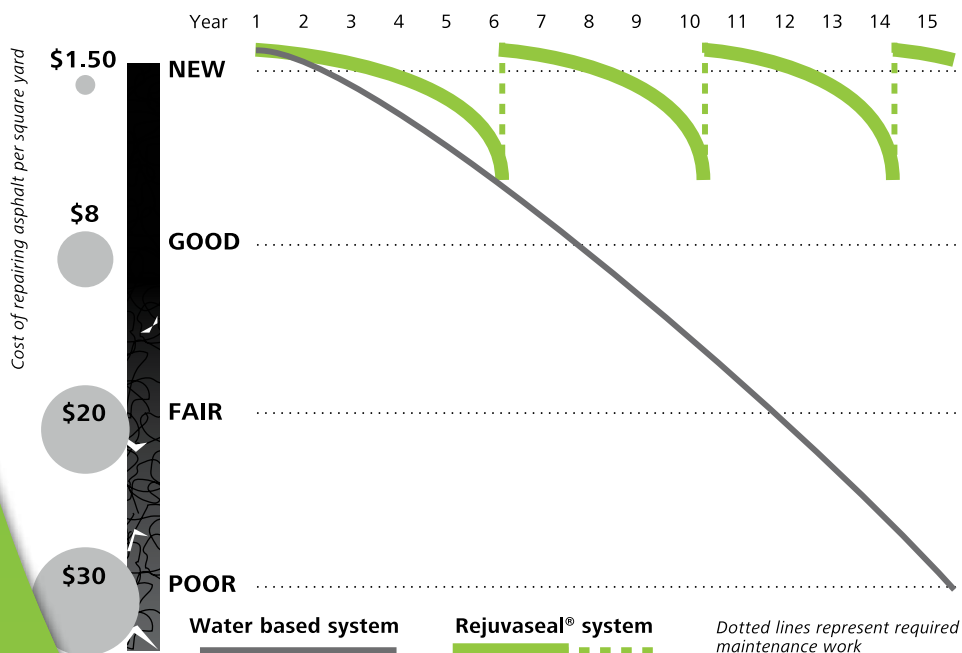
Just as you paint a new house to protect it from the elements, asphalt requires protection to maximize its lifespan. As an organic material, asphalt is susceptible to the actions of nature and from day one experiences deterioration due to air, water and ultraviolet rays from the sun. Failure to maintain your pavement on a routine basis can erode its life cycle.

The good news is that unlike sealers that are applied frequently, a RejuvaSeal® application is recommended every 3-5 years and extends the life of your investment, reducing your total cost of investment and increasing your return on investment! Because it penetrates the pavement, the rejuvenation process improves the condition of the asphalt. RejuvaSeal® does not create a surface build-up that will chip, peel or delaminate, and it will last much longer, and do the job much better than a traditional sealcoat.



MAINTENANCE CYCLES AND COSTS

Because RejuvaSeal® keeps asphalt in better condition, maintenance is required less frequently and saves you money.



THE REJUVASEAL® WARRANTY

When applied by a certified applicator, there is a 3 year warranty for RejuvaSeal® against flaking, peeling, chipping and spalling. The warranty also states that the treated surface will remain fuel-resistant for a period of 3 years and reduces the ability for fluids to penetrate the surface.

REJUVA SEAL®

PROTECTING YOUR ASPHALT INVESTMENT IS WHAT MATTERS MOST

The longer you let your asphalt assets deteriorate, the more time and money it will cost you to restore those assets to accepted standards. Proper maintenance, done in a timely manner, is the key to preserving your asphalt, extending its life cycle and maintaining its curb appeal. Spending \$1.⁵⁰ per square yard on pavement preservation, before the asphalt starts to deteriorate, eliminates or postpones spending \$20.⁰⁰ to \$30.⁰⁰ on time-consuming and expensive repairs, repaving or overlay costs. Applying RejuvaSeal® on a periodic basis can extend the useful life of your pavement indefinitely, maximizing the capital investment you've made in your asphalt assets.

APPLICATION AND TOOLS

RejuvaSeal® should be applied to pavements before they begin to show the deleterious signs of age. The surface must be clean and dry with a surface temperature of 50°F (10°C) or above. Depending on weather condition and porosity of the asphalt surface, RejuvaSeal® usually requires 24 hours for the application process.

The optimal application rate is dependent on pavement design, age and existing pavement condition. A test patch should be completed 24 hours prior to application to determine the optimal rate.

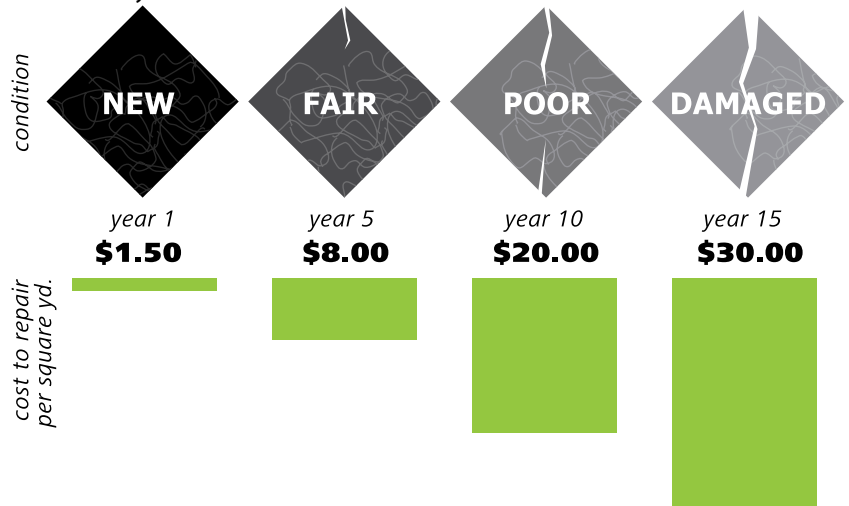
For applications covering a large surface area, RejuvaSeal® must be applied with a precision spraying machine such as a DESCO D200. This compact machine contains a computer-controlled flow rate to ensure uniform application of the material. As a point of reference, a DESCO D200 can treat an area of approximately 3,500 – 4,500 yd² per hour or 4,200 – 5,400 m² per hour.

In general:

Average application rate ranges from approximately 0.05 gallons to 0.065 gallons per yd² or 0.29 liters per m². This rate varies on the age and the level of oxidation. The more oxidized the asphalt, the heavier the application required to restore oils to the surface and extend the useful life of the pavement.

VALUE OF TIMELY PAVEMENT MAINTENANCE

The longer you let your asphalt assets deteriorate, the more money it will cost to restore those assets.





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