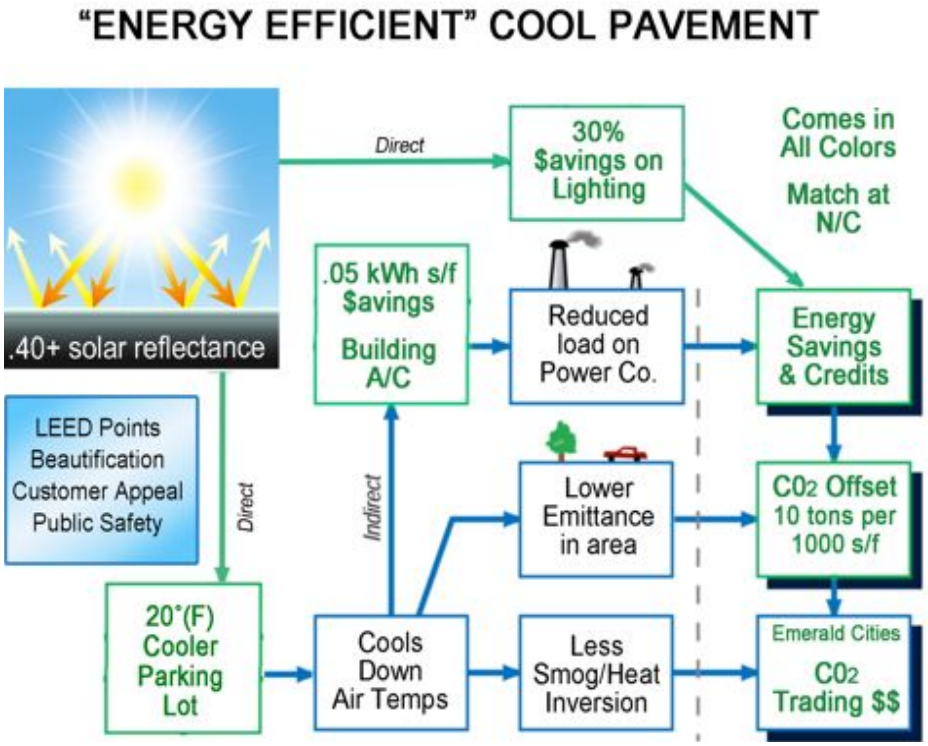
Emerald Cities™
Cool Pavement Coatings

www.emeraldcitiesusa.com

Emerald Cities™ "Cool Pavement Coatings" reduce surface heat of asphalt 20-30˚(F), lower A/C energy costs and reduce 10 tons of CO_2 per 1000 sq.ft. These “ENERGY EFFICIENT” nano-coatings were designed to protect and reclaim deteriorating asphalt from the effects of thermal heat, UV radiation degradation and water penetration... the major reasons of asphalt delamination leading to breakdown.

Emerald Cities™ is in a public-private partnership with DOE/ Lawrence Berkeley National Labs promoting "Cool Pavement" coatings designed for cooling, repair and maintenance of parking lots, cross walks, school yards and public surfaces. Emerald Cities™ cool coatings save 30% on parking lot lighting, kWh on adjacent buildings, generates LEED points and Emerald Cities Carbon Offset Rebates. Cool Pavement can transform an ordinary hot asphalt surface into a cool and beautiful architectural design statement.



July 12, 2010 110˚F Phoenix, Az.

Fresh Laid Asphalt 209˚F
Cool Pavement 135˚F

"Cool Pavement" for Inner City Athletes

EHNANCING HEALTH BY IMPROVING THE SPORTS ENVIRONMENT

Purpose: Emerald Cities™ seeks sponsors and philanthropic contributions to finance the resurfacing of inner city basketball courts with Cool Pavement.

Problem:

According to the National Youth Sports Safety Foundation, up to 5 million young athletes in the U.S. are treated in emergency rooms each year for sports-related problems, the majority of which are related to heat. Most inner city basketball courts have a black asphalt surface generating unhealthy emissions and radiating heat on an average of 30°(F) to 50°(F) hotter than the ambient air temperature. During summer months, athletes exerting themselves on these surfaces are at exposed to a higher risk of dehydration and over-heating, which can lead to loss of consciousness and even coma where damage to the brain and other internal organs may result. If the situation is not addressed within a few minutes, the athlete's condition can deteriorate rapidly, becoming an emergency situation with potentially catastrophic results. Because these basketball courts represent a critically important recreational and social asset within the inner city community, it is imperative to reduce the risks of urban heat index to protect the young athletes that frequent these locations.

Solution: Emerald Cities™ Cool Pavement is a solar reflective ultra high performance coating for asphalt developed in cooperation with Lawrence Berkeley National Laboratory (LBNL) which has proven to help reduce temperatures of asphalt surfaces by as much as 30° Fahrenheit and emissions up to 15%.

Initiative: Emerald Cities™ has launched the "Cool Pavement" initiative to resurface inner city basketball courts. We seek corporate and individual sponsors and contributors to financially contribute to this program in an effort to reduce urban heat index and better protect inner city athletes.

THE PROGRAM

Sponsorships: (sponsorship description on next page)

The Free Throw	$ 1,000	Individual Contributor
The Lay-up	$ 5,000	Corporate Contributor
The Three Pointer	$ 10,000	Neighborhood Sponsorship
The Slam Dunk	$ 50,000	City Sponsorship
The MVP	$ 100,000	State Sponsorship
The Championship	$1,000,000*	Program Sponsorship

Objectives:
Cools asphalt surface heat by 30°-50° (F)
Reduce $C0_2$ and GHG emissions
Improve air quality
Decrease health risks to inner city athletes
Community Outreach

MEYERS ELEMENTARY SCHOOL, SAN JOSE

BEFORE & AFTER COOL PAVEMENT

SCHOOL IS HOT AND LOOKS DIRTY

ASPHALT IS HOT - BETWEEN BUILDINGS AND PLAY YARD

SANDSTONE PLAY YARD - AQUA LOT & WALKWAYS

ASPHALT COLOR

CSI Asphalt Color Selection Guide

CSI Asphalt Color

Environmentally Friendly

Distinguishable Color

Free of Toxic Fumes and Agents

CSI Asphalt Color Integral Mix

- CSI Asphalt Color Integral Mix is available in a variety of standard colors.
- CSI Asphalt Color Integral Mix beautifies the pavement to harmonious earthtone colors.
- CSI Asphalt Color Integral Mix is free of toxic, organic solvents and carcinogenic agents.
- There are no hazardous gases or fumes given off as the final product cures.

CSI Asphalt Color Sealer Mix

- CSI Asphalt Color Sealer Mix beautifies the pavement to harmonious earthtone colors.
- CSI Asphalt Color Sealer Mix contains no toxic, organic solvents or carcinogenic agents.
- CSI Asphalt Color Sealer Mix is environmentally friendly in that is does not produce hazardous gases or fumes as the final product cures..
- Provides additional resistance to abrasion and prevents damage to asphalt against the harmful affects of sunlight and oxidation.

COMBINING ART & SCIENCE IN CONCRETE

CSI

ChemSystems,Inc.

CSI Asphalt Color Selection Guide

CSI Asphalt Color Sealer Mix


Rust Red**


Granite


Clay**


Leather


Sienna**


Mustard


Bronze**


Moss Green


Basalt**


Aspen

***Colors are available in Integral Mix*

CSI Asphalt Color Integral Mix

CSI Asphalt Color Integral Mix is a cost effective powder colored additive for conventional hot mix asphalt. The CSI Asphalt Color Integral Mix is added to the hot asphalt at the asphalt batch plant and delivered to the project site fully colored. Conventional asphalt paving procedures are utilized in laying the integrally colored asphalt.

PRODUCT BENEFITS

- CSI Asphalt Color Integral Mix is available in a variety of standard colors.
- CSI Asphalt Color Integral Mix beautifies the pavement to harmonious earthtone colors.
- CSI Asphalt Color Integral Mix is free of toxic, organic solvents and carcinogenic agents.
- There are no hazardous gases or fumes given off as the final product cures.

PACKAGE SIZES

CSI Asphalt Color Integral Mix is available in 40- and 50-pound bags, depending on color.

- Basalt, Bronze and Clay colors are available in 40-lb. bags.
- Sienna and Rust Red are available in 50-lb. bags.

COVERAGE RATES AND DRY TIMES

- It is recommended that CSI Asphalt Color Integral Mix, when mixed with hot asphalt, be installed at a minimum of one inch layers. One ton of mixed product based on (1/2 max. med. mix or 12.5 mm) should yield approximately 160 square feet of one inch thickness.
- Cure time is a factor of traffic and current weather conditions. The same procedures that are used for standard hot mix overlays should be observed. As with standard asphalt hot mix applications the pavement will fade from a shiny dark surface to a lighter duller surface. The original color hue will be dark and shiny and will fade into an earthtone surface within a one month time period.

CSI Asphalt Color Sealer Mix

CSI Asphalt Color Sealer Mix is an innovative coloring system for asphalt emulsion seal coat. CSI Asphalt Color Sealer Mix when mixed with a commercial grade asphalt emulsion seal coat provides additional resistance to abrasion, and prevents damage to asphalt against the harmful effects of sunlight and oxidation. It prolongs asphalt pavement life, reduces maintenance costs, and beautifies the pavement by drying to harmonious earthtone colors and even textured surface coat. There are no toxic, carcinogenic agents, or organic solvents in CSI Asphalt Color Sealer Mix. There are no hazardous fumes given off as the final product cures.

PRODUCT BENEFITS

- CSI Asphalt Color Sealer Mix beautifies the pavement to harmonious earthtone colors.
- CSI Asphalt Color Sealer Mix contains no toxic, organic solvents or carcinogenic agents.
- CSI Asphalt Color Sealer Mix is environmentally friendly in that is does not produce hazardous gases or fumes as the final product cures.
- Provides additional resistance to abrasion and prevents damage to asphalt against the harmful affects of sunlight and oxidation.

PACKAGE SIZES

- CSI Asphalt Color Sealer Mix is available in 50-pound bags.

COVERAGE RATES AND DRY TIMES

- The coverage will be between 30 and 80 square feet per gallon of the final mixture depending on the porosity and roughness of the surface to be covered. If the surface is extremely porous or extremely smooth two applications are recommended. For first time applications, two coats are also recommended.
- Cure time may be influenced by temperature and relative humidity. Under normal conditions, cure times are from two to eighteen hours. Sheltered or shady areas may also require longer cure times. In two coat applications, allow the first coat to cure before applying the second coat.

- *The colors on this color card approximate, as closely as possible, the appearance obtained in natural light. Variables, including job conditions and finishing techniques, effect the final color. If color accuracy is critical, a pre-construction sample utilizing actual job site materials and construction methods is required. Information contained in this brochure is to the best of our knowledge, true and accurate but all recommendations or suggestions are made without guarantee. Since the use of the products is beyond our control, ChemSystems, Inc. disclaims any liability incurred in connection with the use of our products and any information contained herein.*

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100% ACRYLIC LEED QUALIFYING COLOR COATING

CALIFORNIA®
Performance Coatings


Clouded Gray


Green Leaf


Clear Blue


Twilight Tan


Sunset Red


Dusted Brown

These colors are a close representation of the actual color and may vary slightly from the actual product.

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CALIFORNIA® PERFORMANCE COATINGS ARE

"GREEN"

100% Acrylic LEED Qualifying Color Coating

LEED SS Credit 7.1 | *Committed to the environment*

California Performance Coatings qualify for the Leadership in Energy and Environmental Design (LEED) SS Credit 7.1, Heat Island Effect: Non-Roof, paving materials with a Solar Reflective Index (SRI) of at least 29. The SRI is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. Our LEED SRI qualifying color coatings will help designers, contractors and consumers choose materials that make communities more energy efficient while generating lower environmental impact. Additional LEED credits may be available through the specification of surfaces and systems manufactured by California Products Corporation. To inquire about these possible LEED credits, please contact us at: **info@calprocorp.com**

California® Performance Coatings | *Exceptional quality*

California Performance Coatings are formulated to meet every performance expectation. Our six LEED credit colors increase the performance of asphalt or concrete surfaces by reducing oxidation. This retards pitting, flaking, and the erosion of the surface. Durable and slip resistant, our coatings provide an attractive surface with easy and cost effective maintenance. All California Performance Coatings are subjected to ongoing in-house and independent laboratory testing. Through continuous research and development, California Products Corporation integrates the latest acrylic polymer technologies into our asphalt and concrete products to produce a premier sports surface.

California Products Corporation | *Green Manufacturing*

California Products Corporation (CPC) is an industry leader in developing environmentally sensible products using green manufacturing processes. The CPC manufacturing plant located in Andover, Massachusetts, is a modern and technologically efficient facility that proudly manufactures environmentally preferred products. Our coatings contain post industrial and recycled content, 99% of dust and pigment particles are contained during every production run, all generated waste water is recycled into the manufacturing of our products, and the plant is one of the largest users of recycled materials in the industry.

BE PLANET RESPONSIBLE, CHOOSE CALIFORNIA PERFORMANCE COATINGS.

green wise

SCHOOL APPLICATIONS

StreetBond™

QUEST SPECIALTY CHEMICALS™

QUEST CONSTRUCTION PRODUCTS


Live Oak Elementary School, San Ramone, CA
Playground recreation area in StreetBond custom colors, ‘Sea Foam’, Mustard’ & ‘Cranberry’


HEAVEN
8
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Guild School

StreetBond™

QUEST SPECIALTY CHEMICALS™

QUEST CONSTRUCTION PRODUCTS

StreetBondSR™
Solar Reflective For Parking Lots

Waterloo, ON: Image of Project Installation at Research In Motion's Main Office Area

Augusta, ME: First Grocery Store to Obtain LEED Platinum accreditation

StreetBondSR (in Slate color) was used at Research in Motion's 59,000 ft² parking lot area. The use of **StreetBondSR** led to LEED credits that contributed to overall LEED certification of the building.

Slate as a color choice maintains the traditional parking lot look and works well to obscure dirt, grime and darkening.

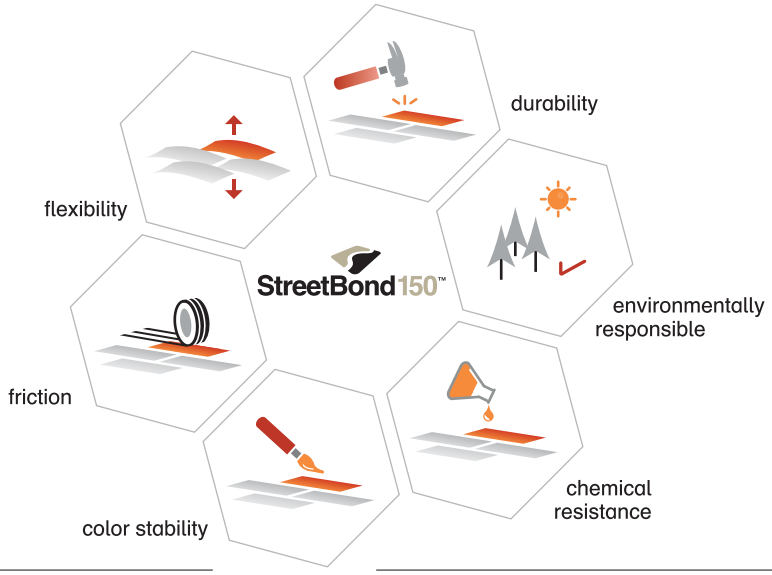
Approximately 70,000 sq. feet of **StreetBondSR** dark Slate coating went onto the parking area at Hannaford's Augusta, Maine store location.

Hannaford's was able to obtain enough LEED credits to become the first ever LEED Platinum certified grocery store in the world.

StreetBondSR™ – all the benefits of **StreetBond150**™ with Solar Reflective Characteristics!

A highly refined balance of **6** critical performance characteristics that bonds permanently to all asphalt surfaces.

Quality results and enduring beauty.



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QUEST CONSTRUCTION PRODUCTS

The Quest Construction Products Family of Brands:
HYDROSTOP UNITED COATINGS StreetBond

Western COLLOID
LAYERS OF EXPERIENCE & QUALITY for 40 YEARS

Western Colloid Inc. (WCI) primary goal is to provide green solutions and coatings that reduce heat island effects, adhere and comply to Energy Star and USGBC, LEED standards.

WCI has been an innovator in light colored asphalt sealers for over half a decade. Six years ago WCI was asked by a manufacturer of stealth technology aircraft to develop a light colored seal coat for the tarmac and runway at their facility. The purpose of this project was to make the facility disappear from overhead, satellite, and thermal imaging surveillance. WCI accepted this challenge and provided a light colored seal coat for use at this facility. The product provided had a SRI of over 20, emissivity between 85 and 90 and a surface temperature drop of more than 25% compared to the existing dark colored surface. Using this same technology, Western Colloid has developed a grey seal coat for parking lots and school playgrounds. Since we are active members of the USGBC we strived to manufacture a product that is non-carcinogenic and safe for the environment. We use only carbon based elements in our manufacturing process; virgin asphalt without chemical cut back, and avoid harsh chemical emulsifiers. By manufacturing using cost effective existing technology with only the purist ingredients available, WCI seal coating products are harder and longer lasting and achieve a wet track abrasion test number of less than 18. Our products low wet track abrasion test number translates into a longer surface life and little to no surface shedding.

By providing a light colored seal coating product to school playgrounds WCI hopes to achieve a high SRI, lower heat island and a long lasting no toxic surface for the safety and comfort of all California school children.

WCI is excited to be a part of the round table Cool Schoolyard discussion on July 10, 2012 and will be providing product samples for onsite data testing. We look forward to being a part of this discussion.

Steve Jackson

Western Colloid Inc.

Western Colloid Gray Sealcoat