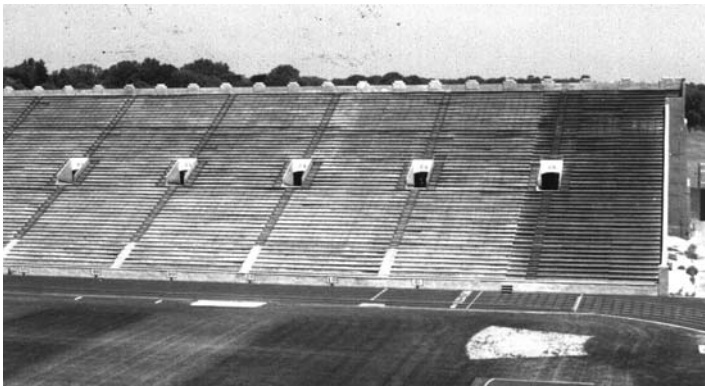


 Edison Coatings, Inc.

SYSTEM 90

**Consolidants, Sealers & Stains for
Stone, Masonry & Concrete**



Weatherproofing



Consolidation



Custom Color Stain

SYSTEM 90-Series

DESCRIPTION:

SYSTEM 90-Series products are reactive treatments designed for maximum performance and exterior durability in the consolidation, protection and decoration of on-grade and above-grade stone, masonry and concrete. Surfaces treated with SYSTEM 90 products are hardened and protected against a wide range of chemical and weather exposures, including acid rain, melting snow, freeze-thaw, de-icing salts, air pollutants, wind driven rain and a variety of other materials.

SYSTEM 90-Series sealers are penetrating, breathing treatments designed to chemically react following application. Reactions proceed in two directions:

- 1. Bonding to the substrate*
- 2. Increase in molecular weight*

The first reaction results in tenacious adhesion, while the second results in an interlocked highly stable matrix within the substrate which resists degradation by weather, sunlight and chemical exposures.

SYSTEM 90 products are based on carefully formulated combinations of materials which provide better balanced overall performance characteristics than typical single ingredient solutions commonly used in weatherproofing. Within the *90-Series* there is a wide array of selections, each of which is optimized to a particular range of applications. Formulations have been optimized through extensive accelerated weathering testing in accordance with ASTM G-53, correlated with over 20 years of natural weathering observations.

All *SYSTEM 90-Series* formulations produce durable, cross-linked treatments upon drying. *SYSTEM 90-W* is low in odor and VOC's, while *90-WL* is odorless and has "zero" VOC's. *SYSTEM 90-II* is formulated with VOC-exempt solvents, allowing maximum severe service performance with complete VOC compliance (<600 g/l).

SYSTEM 90-WL

Low Molecular Weight - For Dense & Color-Sensitive Surfaces

This one component, low viscosity, water-borne reactive sealer has been formulated with an emphasis on low molecular weight ingredients. This allows the treatment of color-sensitive surfaces like Limestone and Light-Colored Architectural Concrete with little or no change in appearance, and allows better penetration of dense and traffic bearing surfaces. Minimum application temperature is 40°F (4°C). It is applied to damp or dry surfaces in two passes, wet on wet, and may be used on all types of natural and manufactured masonry, concrete and stucco. Not for gypsum plasters.

SYSTEM 90-W

General Purpose Masonry & Concrete

This heavy duty, one component water-borne sealer is designed for use on porous concrete and masonry. Formulated with a combination of low and medium molecular weight components, *SYSTEM 90-W* restricts larger pore sizes which may otherwise permit moisture infiltration. This makes *SYSTEM 90-W* an excellent choice for use on common

brick, concrete, concrete block, stucco and other natural or manufactured porous masonry surfaces. Product is clear and non-yellowing, and self-crosslinks to produce slight surface consolidation and improved surface stain and chemical resistance. Treatment may slightly intensify natural color of some color-sensitive surfaces. Minimum application temperature is 45°F (7°C). May be applied to damp or dry surfaces in two passes, wet on wet. Not recommended for use on non-porous surfaces such as ceramic tile or glazed terra cotta.

SYSTEM 90-II

Severe Service Catalytic Sealers & Consolidants

Designed for the most severe environmental exposures, this two component, VOC-Compliant solvent-borne series of sealers offers exceptional durability in both horizontal and vertical applications. "Regular" *SYSTEM 90-II* is designed for a wide range of applications on concrete and masonry. For applications on high traffic areas such as parking decks and ramps, *SYSTEM 90-II* "Primer/Topcoat" combines the excellent penetration and salt water repellency of an oligomeric primer with the hardness and chemical resistance of a two component high solids topcoat. For highly porous surfaces and vertical applications, *SYSTEM 90-II* "Type S" provides the benefits of the Regular system in a single coat application. Minimum application temperature is 15°F (-4°C) on frost-free surfaces. Produces a durable glaze on properly prepared glazed brick and terra cotta.

SYSTEM 90-W-Color, 90-II-Color

Custom Color Sealers & Stains

Pigmented treatments combine all the performance of the *SYSTEM 90-Series* with the aesthetic benefits of a durable semi-transparent stain. A wide range of standard Restoration and Architectural colors is available, as well as custom colors, stains to simulate aging and weathering, and "Liquid Dirt" to tone down fresh repairs.

FEATURES:

☑ **ADHESION:** *90-Series* products chemically react upon drying to form strong and durable adhesive and cohesive bonds within the surface.

☑ **CONSOLIDATION:** The cross-linking reaction which occurs during cure forms a tough, cohesive matrix which has a consolidating effect on friable masonry and concrete surfaces. This prevents surface chalking and dusting, and may improve strength and abrasion resistance of treated surfaces. Consolidation effectiveness must be tested by Edison Coatings' laboratory prior to use for this purpose. Some stone and masonry substrates may better benefit from a 100% active, ethyl silicate-based, deep penetrating consolidating treatment, *System 95*. Contact your Edison Coatings Representative for more information.

☑ **CHEMICAL RESISTANCE:** Products resist attack by common environmental chemicals, such as acid rain, de-icing salts, common air pollutants, lubricants and anti-freeze.

☑ **PENETRATION:** Deep penetration contributes to excellent wearing, traction and weather resistance.

☑ **WATER REPELLENCY:** Resist water infiltration and salt water contamination, even under wind-driven rain and extended ponding conditions.

☑ **BREATHING:** High vapor permeability prevents entrapment behind the treatment, avoiding damage.

☑ **COMPATIBILITY:** Let Edison review your requirements and provide a complete system of mutually compatible specialty materials.

☑ **VOC COMPLIANCE:** All *SYSTEM 90-Series* products are VOC-Compliant (VOC<400 g/l).

APPLICATION:

1. **Surface Preparation:** Apply sealer to clean, damp or dry concrete or masonry substrates, free of grease, oil, dirt, coatings or other materials which may interfere with sealer penetration, or which may stain upon sealer contact. Complete any repairs or caulking prior to sealing. For best results, use Edison *90-Series* Sealers in conjunction with *SYSTEM 44*, *Custom 45*, and *Deck-Top 47* patching and resurfacing compounds and *SPEC-JOINT 46* repointing mortars.

2. **Application:** *SYSTEM 90-WL* and *90-W* are generally applied in one coat, using two passes, wet on wet. *SYSTEM 90-II Regular* is applied in two coats, allowing several hours or more for drying between coats. *SYSTEM 90-II Type S* is usually applied in one coat, but very porous surfaces may warrant a second application after the first coat has dried. *SYSTEM 90-II Primer/Top Coat* is applied as a two coat application. The *Primer* is applied in one coat, using two passes, wet on wet, and the *Top Coat* is a single pass, applied after the primer has substantially dried.

On vertical surfaces, the products should be applied in such a manner as to saturate the surface without creating a heavy rundown. For best results, work from the bottom up.

On horizontal surfaces, apply sufficient material so that sealer "stands" for several minutes before being fully absorbed. Spread or remove any excess material which remains ponded after 15 minutes.

On new concrete, *SYSTEM 90-II* can act as a curing compound, reducing rate of moisture loss and thereby aiding in cement hydration. Apply when surface has been finished, has set and has dried sufficiently to allow good sealer penetration. Typically, this will be 12-24 hours after pouring.

3. **Temperature Limits & Curing:** *SYSTEM 90-Series* sealers develop water repellency quickly after drying, and generally require no special protection or curing thereafter.

SYSTEM 90-W Type L should not be applied when rain is anticipated within 12 hours of application, and should be

TYPICAL PERFORMANCE PROPERTIES		
Accelerated Weathering ASTM G-53	1500 hrs.	No Change
	6000 hrs.	Slight Wear
Wind-Drive n Rain, 98 MPH	Federal Spec. TT-C-555b	PASS (90-II)
Freeze Thaw Resistance	20 Years, Natural Exposure	No Scaling or Delamination

WATER ABSORPTION (Ontario MTC) & MOISTURE VAPOR PERMEABILITY (Oklahoma DOT)		
Low Air Concrete Substrate	Absorption	Vapor Permeability
Untreated Control	5.03%	100.0%
SYSTEM 90-II	0.53% PASS	97.9% PASS
STANDARD	1.0% Max.	95.0% Min.
Air Entrained Concrete Substrate	Absorption	Vapor Permeability
Untreated Control	4.52%	99.7%
SYSTEM 90-II	0.39% PASS	97.4% PASS
STANDARD	1.0% Max.	95.0% Min.

CHLORIDE ION PENETRATION RESISTANCE			
AASHTO T259, % Chloride at Indicated Depth, 3% Salt Ponding			
Low Air Concrete	2-13 mm	13-25 mm	25-38 mm
Control	0.2231	0.0856	0.0053

SALT SCALING RESISTANCE		
Ontario MTC, 50 Freeze-Thaw Cycles		
Specimen	Low Air	Air Entrained
Control (Untreated)	1.224 FAIL	0.179 PASS
SYSTEM 90-II	0.394 PASS	0.169 PASS

NCHRP 244 SERIES II		
Property	Min. Req.	SYSTEM 90-WL
% Reduction, Water Absorption	75%	81.8% PASS
% Reduction, Chloride Ion Infiltration	75%	91.3% PASS
% Vapor Transmission	100%	138.3%

protected, if necessary, during that 12-hour cure period. Minimum application temperature is 40°F (4°C).

SYSTEM 90-II solvent-borne sealers will not freeze, but the use of any sealer at temperatures below freezing should be avoided, if possible, due to the possibility that frost may impede penetration and adhesion. If sealer must be applied at temperatures below 40°F (4°C), surfaces must be dry and frost-free.

SYSTEM 90-W waterborne sealer requires a minimum temperature of 45°F (7°C) for proper reaction and film formation. Air, surface and product temperatures must all be considered when working at or near marginal conditions. Drying is affected by atmospheric humidity and air movement, so drying times may be greatly extended under cool, damp conditions. Do not apply when temperatures may drop below 45°F (7°C) before product has thoroughly dried.

4. Compatibility: Solvents in **SYSTEM 90-II** may attack asphalt, roofing materials, uncured caulk and some other types of coatings. **VOC-Exempt** solvents are capable of lifting paint. Do not apply without protecting surfaces or materials which may be damaged by solvent contact. Caulks should be allowed to cure for a minimum of 72 hours before sealer application.

5. Safety & Handling: Carefully read and observe all safety and handling guidelines as detailed in the Material Safety Data Sheets supplied with this product.

Use with adequate ventilation. Use organic vapor/mist respirator when spraying. Take proper precautions to prevent solvent fumes or vapors from being drawn into ventilating system intakes, open windows or into occupied areas by any other means. Do not use solvent-borne formulas indoors. Use supplied air respirator when working in enclosed areas.

SYSTEM 90-II solvent-borne formulas are flammable liquids. Do not expose to open flames, sparks or other ignition sources. Observe label warnings. Store in tightly closed containers below 85°F (30°C), away from any ignition sources.

Avoid skin and eye contact. In case of skin contact remove saturated clothing and wash affected area with mild soap and warm water. In case of eye contact flush with clean water for at least 15 minutes and call physician.

COVERAGE RATES, SQ. FT./GAL.				
Substrate	90-WL	90-W	90-II Reg.	90-II Primer/ Top Coat
Glazed Brick, Terra Cotta	200 - 300	NR	250 - 300	200 Primer 400 Top
Dense Concrete	175 - 250	175 - 250	150 - 225	150-200 P 300-400 T
"Average" Surfaces	125 - 175	125 - 175	125 - 175	125-175 P 150-225 T
Common Brick	100 - 150	100 - 150	125 - 175	100-150 P 125-175 T
Concrete Block	NR	90 - 125	100 - 150	90-125 P 100-150 T
Rates are Estimates, not Specifications. Basis: 1 coat 90-WL , 90-W , applied wet-on-wet; 2 coats 90-II (overall rates, not "per coat"); 1 coat each 90-II Primer/TopCoat . For best estimate, apply test areas in accordance with application instructions and measure actual usage rates. NR = Not Recommended.				

Protect cars, shrubbery and other property from overspray, using protective covers.

KEEP FROM FREEZING.

LIMITED WARRANTY:

Limited Warranty programs are available on an individual project basis. Call for details, coverages and limitations.

FOR COMMERCIAL & INDUSTRIAL USE ONLY.

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