

Curing and Sealing Guide  
For Exterior and Interior Concrete  
Substrates  
2019



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## Your partner for **success.**

Building on the past and planning for the future, **Buckeye Ready-Mix** will continue to adapt to the changing environment while providing the best quality products and service. We believe in partnering with customers to meet the demands of the ready-mix industry and are committed to providing you with what it takes to be successful.

## **ASTM C 309**

Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete, covers liquid membrane-forming compounds suitable for application to concrete surfaces to reduce the loss of water during the early-hardening period.

The membrane-forming compounds by this specification are suitable for use as curing agents for fresh concrete, and may also be used for further curing of concrete after removal of forms or after initial moist curing. Solutions of silicate salts are chemically reactive in concrete rather than membrane-forming; therefore, they do not meet the intent of this specification.

## **ASTM C 1315**

Standard Specification for Liquid Membrane-Forming Compounds having special properties for Curing and Sealing Concrete. Provides requirements for membrane-forming liquids suitable for use as curing compounds and sealers on freshly placed concrete and as sealers on hardened concrete. These membranes have special properties, such as alkali resistance, acid resistance, adhesion-promoting qualities, and resistance to degradation by UV light.



All fresh concrete surfaces must be adequately cured to attain the performance requirements needed for that particular concrete mixture.

**Surface Preparation:** The concrete surface must be clean and free of standing water.

**Application:** For the best cure of freshly placed concrete, apply the product as soon as possible after finishing operations and/or immediately after the disappearance of the “sheen” of surface moisture. Apply at a uniform coverage by spray or roller application. Keep pressure in pump-up sprayer as high as possible. If roller applied, use a short 3/8” solvent resistant sleeve. For best application results, product temperature should be between 50-100 degrees F with ambient temperature between 45-110 degrees F. Do not subject to rain or water for at least 12 hours after application.

**Clean-up:** Tools and equipment may be cleaned with EUCO SOLVENT for solvent based or warm soapy water for water based products.

**Curing Concrete:** Curing is the action taken to maintain moisture and temperature conditions in a freshly placed concrete mix to allow cement hydration to occur so that the potential properties of the concrete may develop. When concrete is not properly cured, it's strength, durability, appearance and resistance to freeze-thaw damage will suffer. There are three methods of curing new concrete:

**First Method:** Water cure which involves keeping a continuous flow, ponding or fog of water on the concrete surface for at least 7 days.

**Second Method:** Placement of moisture retaining coverings such as plastic sheeting, wet burlap, or curing blankets over finished concrete surfaces.

**Third Method:** The application of liquid membrane-forming curing compounds or curing and sealing compounds. Curing and sealing compounds have the added benefit of providing a longer lasting protective and decorative seal on the surface. The use of a dissipating or removeable curing compound is a much more appropriate option to cure new concrete that will later be coated or receive carpet or tile.



## Recommended Products for Curing:

**Kurez W VOX:** Clear water based wax emulsion curing compound for concrete. It maintains adequate moisture in new concrete so that desired properties, such as strength and durability can develop. This is designed for use interior and exterior, but recommended to be used for exterior concrete. Minimum coverage 200sqft/gal.

**Kurez DR VOX:** Liquid membrane forming curing compound formulated to provide an excellent initial cure for concrete. It begins to break down and deteriorate upon exposure to traffic and UV light. Dissipation begins approximately 4 to 6 weeks after application. Product will discolor when exposed to sunlight. Minimum coverage 300sqft/gal.

**Diamond Clear 350:** Non-yellowing, low VOC, exempt solvent based concrete curing compound and cure & seal used to cure and seal exterior concrete. This product is very easy to use and can be tinted with Euclid Universal Color Packs to even out variegated concrete surfaces. Minimum coverage 300 sqft/gal/

**Super Diamond Clear 350:** State-of-the-art concrete curing compound and cure & seal designed with a high solids formulation to provide the most efficient moisture retention for proper cement hydration and strength gain, as well as protection from weathering and abrasion. It is well suited for architectural concrete and can be used with Euclid Universal Tint Packs. Minimum coverage 300sqft/gal.

## **Sealing Concrete:**

There are two general types of sealers: Film-forming and penetrating. Film forming sealers reduce penetration of water and contaminants and may also darken the concrete and provide varying levels of gloss, giving the substrate a “wet look”. Penetrating sealers and densifiers soak into the concrete surface and chemically react in the pores to produce a water and chloride repellent barrier. Penetrating sealers last longer than film-forming sealers and provide protection without changing the appearance. Apply 28 days after cure and free of curing or form release compounds and other contaminants that will prevent the proper penetration of product surfaces. Must be dry a minimum of 24 hours when exposed to any source of moisture.

## Recommended Products for Sealing:

**Everclear VOX:** Water-based pure acrylic sealer for concrete with an excellent blush resistance to yellowing from UV exposure. Its low odor makes it usable for interior as well as exterior. This product dries to a clear, matte finish, but a higher gloss can be achieved with additional coats. Minimum coverage: 300sqft/gal.

**Diamond Clear 350:** Non-yellowing, low VOC, exempt solvent based concrete curing compound and cure & seal used to cure and seal exterior concrete. This product is very easy to use and can be tinted with Euclid Universal Color Packs to even out variegated concrete surfaces. Minimum coverage: 400sqft/gal.

**Super Diamond Clear 350:** State-of-the-art concrete curing compound and cure & seal designed with a high solids formulation to provide the most efficient moisture retention for proper cement hydration and strength gain, as well as protection from weathering and abrasion. It is well suited for architectural concrete and can be used with Euclid Universal Tint Packs. Minimum coverage: 400sqft/gal.

**Chemstop WB Regular:** Waterbased, siloxane/silane water repellent. It is formulated for use on dense surfaces, such as pre-cast or poured-in-place concrete. It is non-yellowing, odorless and breathable and does not darken or provide a glossy appearance to the surface. Minimum coverage: 80sqft/gal.

**Euco-guard 350:** A deep penetrating, solvent based siloxane sealer designed to protect concrete pavement surfaces against the adverse effects of de-icing salts, moisture, weathering and freeze damage. Minimum coverage: 75-125sqft/gal. (Higher or lower coverage rates may be used depending on surface porosity and desired level of protection.)

**Baracade Silane 100 C:** Highest performance sealer available. A breathable, colorless non-yellowing, deep penetrating concrete water repellent. A 100% silane formulation that produces a hydrophobic treatment to reduce water absorption. Minimum coverage: 200sqft/gal.

## Fresh Concrete not Subject to Freezing and Thawing (Interior Fresh)

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mixture design. Below are recommendations on which products and practices are used to properly cure and seal the freshly placed concrete surface.

**Kurez DR VOX:** Applied as a curing compound.

Usually after 4-6 weeks, floors to receive coatings, sealers and coverings must be cleaned thoroughly to ensure good adhesion of the applied product.

**Diamond Clear 350:** Applied as a curing & sealing compound. Do not apply over bleed water. Diamond Clear 350 is a flammable liquid. Use with adequate ventilation and keep away from heat, sources of spark or ignition, and open flames. Block all HVAC ventilation ducts which may distribute solvent odor. Before installing floor coverings, a test section is recommended to ensure a good bond.

**Super Diamond Clear 350:** Applied as a curing & sealing compound. Do not apply over bleed water. Super Diamond Clear 350 is a flammable liquid. Use with adequate ventilation and keep away from heat, sources of spark or ignition, and open flames. Block all HVAC ventilation ducts which may distribute solvent odor. Before installing floor coverings, a test section is recommended to ensure a good bond. Super Diamond Clear 350 will darken the color of the concrete giving these surface a “wet “ look.

## Existing Concrete not subject to freezing and thawing

Concrete sealers can also minimize dusting, protect against some staining (if spills are cleaned up promptly), and they can act as a sacrificial layer to reduce abrasion and wear to the concrete from traffic.

**EverClear VOX:** Applied as a sealer. A very low odor and VOC content suitable for indoor use. Medium Gloss (matte) finish.

**Diamond Clear 350:** Applied as a sealer. Diamond Clear 350 is a flammable liquid. Use with adequate ventilation and keep away from heat, sources of spark or ignition, and open flames. Block all HVAC ventilation ducts which may distribute solvent odor. Before installing floor coverings, a test section is recommended to ensure a good bond. Clear, glossy finish that can be tinted with Euclid Universal Tint Packs.

**Super Diamond Clear 350:** Applied as a sealer. Super Diamond Clear 350 is a flammable liquid. Use with adequate ventilation and keep away from heat, sources of spark or ignition, and open flames. Block all HVAC ventilation ducts which may distribute solvent odor. Before installing floor coverings, a test section is recommended to ensure a good bond. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet look”. Enhances color and gives a glossy appearance that can be tinted with Euclid Universal Tint Packs.

Interior Hardened

It is recommended to follow the practices within ACI 306R, “Cold Weather Concreting” when ambient temperatures fall below 45°F at the time of placement.

When concrete is properly sealed, it will help prevent water from soaking into concrete.

Water can do damage either by freezing or by corroding the reinforcing steel in a slab.

Penetrating and regular sealers can also minimize dusting, protect against chloride ingress (de-icing salt), protect against some staining (if spills are cleaned up promptly) and act as a sacrificial layer to reduce abrasion and wear due to traffic.

When ambient air temperatures fall below 45° F you will not be able to apply a liquid curing compound.

**EXTERIOR FRESH**

## Existing Concrete

Keeping concrete sealed will help prevent water from soaking into the concrete, where it can do damage either by freezing or by corroding the reinforcing steel in the slab. Concrete sealers and penetrating water repellent sealers can also minimize dusting, protect against damage from chloride (de-icing salt) ingress, protect against some staining (if spills are cleaned up promptly.) Sealers can act as a sacrificial layer to reduce abrasion and wear to the concrete from traffic.

**EverClear VOX** applied as a sealer.

**Diamond Clear 350:** Applied as a sealer.

**Super Diamond Clear 350:** - Applied as a sealer.

**EXTERIOR HARDENED**

## **Existing Concrete (continued)**

**Chemstop WB Regular:** Water based silane/siloxane penetrating sealer. Chemstop WB Regular does not darken or provide a glossy appearance to the concrete surface.

**Euco-guard 350:** A deep penetrating, solvent based siloxane sealer designed to protect concrete pavement and surfaces against the adverse effects of de-icing salts, moisture, weathering and freeze damage.

**Baracade Silane 100 C:** A non-yellowing, deep penetrating concrete and masonry water repellent.

## Placed After October 1<sup>st</sup> / Before April 15<sup>th</sup>

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mixture design. When ambient temperatures fall below 45 degrees F, you will not be able to apply a liquid compound. The use of **insulated curing blankets** is recommended to retain the heat of hydration of the fresh concrete to adequately cure the concrete in colder temperatures. *ACI 306R Cold Weather Concreting, American Concrete Institute.*

**Insulated Curing Blankets:** Cover for a minimum of 7(seven) days or as long as possible. Apply a penetrating sealer (Chemstop WB, Euco-guard 350 or Baricade Silane 100 C) after the concrete is minimum of 28 days old and the temperature is 45 degrees F and rising. A good practice would be if these later steps were performed prior to September 1st the following year.

**Chemstop WB Regular**

**Euco-guard 350**

**Baracade Silane 100 C**



## Broom, Stained Finish

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mixture design. Concrete sealers can also minimize dusting, protect against some staining (if spills are cleaned up promptly) and they can act as a sacrificial layer to reduce abrasion and wear to the concrete from traffic.

**Everclear VOX:** Applied as a sealer. A very low odor and VOC content suitable for indoor use. Medium Gloss (matte) finish.

**Diamond Clear 350:** Applied as a sealer. Clear, glossy finish that can be tinted with Euclid Universal Tint Packs.

**Super Diamond Clear 350:** Applied as a sealer. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet look”. Enhances color and gives a glossy appearance that can be tinted with Euclid Universal Tint Packs.

**Exterior / Interior Decorative**

## Stamped

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mix design. When placing stamped concrete, a release agent is usually imprinted in the surface while stamping. This release agent should remain on the surface for 2 (two) days. During this time it is acting as a sufficient curing compound. After the 2 (two) days, it should be removed and once the concrete is dry apply a recommended sealer. Concrete sealers can also minimize dusting, protect against some staining (if spills are cleaned up promptly) and they can act as a sacrificial layer to reduce abrasion and wear to the concrete from traffic.

**Everclear Vox:** Applied as a sealer. A very low odor and VOC content suitable for indoor use. Medium Gloss (mate) finish.

**Diamond Clear 350:** Applied as a sealer. Clear, glossy finish that can be tinted with Euclid Universal Tint Packs.

**Super Diamond Clear 350:** Applied as a sealer. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet” look. Enhances color and gives a glossy appearance that can be tinted with Euclid Universal Tint Packs.

## Exposed Aggregate Concrete

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mix design. The use of a membrane forming sealer will aid in the curing of the concrete. The colors of the natural aggregate used will be highlighted greatly with the use of our recommended products. Concrete sealers can also minimize dusting, protect against some staining (if spills are cleaned up properly) and they can act as a sacrificial layer to reduce abrasion and wear to the concrete from traffic.

**Everclear VOX:** Applied as a cure & seal compound. Medium Gloss (matte) finish.

**Diamond Clear 350:** Applied as a cure & seal compound. Clear, glossy finish that can be tinted with Euclid Universal Tint Packs.

**Super Diamond Clear 350:** Applied as a cure & seal compound. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet look”. Enhances color and gives a glossy appearance that can be tinted with Euclid Universal Tint Packs.

**Browntone CS:** Applied as a cure & seal compound. This product is a non-yellowing, specially formulated with earth-toned pigments that enhances that natural stone and evens out the color.

Exterior/Interior Decorative

## Coverage Rates of Products

### Kurez W:

Smooth Concrete	300 sq ft/gal
Textured Concrete	200 sq ft/gal

### Kurez DR VOX:

Smooth Concrete	400 sq ft/gal
Textured Concrete	300 sq ft/gal

### Diamond Clear 350:

Curing and Sealing	300 sq ft/gal
Sealing Older Concrete	450 sq ft/gal

### Super Diamond Clear 350:

Curing and Sealing	300 sq ft/gal
sealing Older Concrete	450 sq ft/gal

### Everclear VOX:

Sealer only	300 sq ft/gal
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### Chemstop WB Regular:

Dense Surface	80 sq ft/gal
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### Euco-guard 350:

Smooth Concrete	125 sq ft/gal
Textured Concrete	75 sq ft/gal

### Baracade Silane 100 C:

Smooth concrete	200 sq ft/gal
Exposed aggregate	225 sq ft/gal

### Browntone CS:

Sealer only	300 sq ft/gal
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**Buckeye Ready-Mix, LLC**  
**Cure and Sealing Guide Price List**

<b>Product</b>	<b>Price</b>
Kurez W	\$47.25
Kurez DR VOX	\$60.50
Diamond Clear 350	\$112.25
Chemstop WB	\$121.00
Everclear VOX	\$120.00
Euco-guard 350	\$160.00
Super Diamond Clear 350	\$141.50
Browntone CS 350	\$175.00
Baracade Silane 100	\$232.75

## Placed before October 1st Curing

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mixture design. Below are recommendations on which products and practices are used to properly cure and seal the freshly placed concrete surface.

**Kurez W VOX:** Applied as a curing compound. A waxed based emulsion that forms an efficient moisture barrier for optimum curing. Do not subject to rain or moisture for at least 12 hours after application. Usually after 4-6 weeks, floors to receive coatings, sealers and coverings must be cleaned thoroughly to ensure good adhesion of the applied product. This product applied on a smooth troweled surface may result in significantly increased slipperiness A white, opaque liquid that dries to a clear film.

**Kurez DR VOX:** Applied as a curing compound. Usually after 4-6 weeks, floors to receive coatings, sealers and coverings must be cleaned thoroughly to ensure good adhesion of the applied product. A white to pale yellow product that will turn to a deeper amber color when subjected to UV light.

**Diamond Clear 350:** Applied as a curing & sealing compound. Do not apply over bleed water. A clear liquid that dries to a clear, glossy film.

**Super Diamond Clear 350:** Applied as a curing & sealing compound. Do not apply over bleed water. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet” look. A clear liquid that dries to a clear, glossy film.

When using a water based cure a water based sealer is recommended.

When using a solvent based cure a solvent based sealer is recommended.

## Placed before October 1st Sealing

All fresh concrete surfaces must be cured properly to attain the performance requirements needed for that particular concrete mixture design. Below are recommendations on which products and practices are used to properly cure and seal the freshly placed concrete surface.

**Everclear VOX:** Applied as a sealer. Medium Gloss (matte) finish.

**Diamond Clear 350:** Applied as a sealer. Clear, glossy finish that can be tinted with Euclid Universal Tint Packs.

**Super Diamond Clear 350:** Applied as a sealer. Super Diamond Clear 350 will darken the color of the concrete giving the surface a “wet” look. Enhances color and gives a glossy appearance that can be tinted with Euclid Universal Tint Packs.

**Chemstop WB Regular:** Water-based, siloxane/silane water repellent. It is non-yellowing, odorless and breathable that does not darken or provide a glossy appearance to the surface.

**Euco-guard 350:** A deep penetrating, solvent based siloxane sealer designed to protect concrete pavement surfaces against the adverse effects of de-icing salts, moisture, weathering and freeze damage.

**Baracade Silane 100 C:** Highest performance sealer available. A breatheable, colorless, non-yellowing, deep penetrating concrete water repellent. A 100% silane formulation that produces a treatment to reduce water absorption.

## Notes

For additional information on the products listed in this guide, please contact:



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