ENDURABLE
CONCRETE PRODUCTS™

BRIDGING GREEN TECHNOLOGY
& HIGH PERFORMANCE

ENDURABLE CONCRETE SEALER

ENDURABLE CONCRETE SEALER is a revolutionary sealer created from cutting-edge polyurethane technology that allows for maximum penetration, durability, and chemical resistance, while still delivering ease of application. The unique dual-component chemistry of Endurable Concrete Sealer is 100% UV stable, low VOC/odor, and has excellent resistance to hot tire pickup.

Product may be burnished to achieve the look of polished concrete.

ADVANTAGES

- Excellent chemical resistance
- Excellent durability and scratch resistance
- Perfect for forklift traffic
- Excellent versatility allows for interior and exterior use
- Excellent coverage makes product cost-effective
- Color enhancing
- Excellent UV stability - will not yellow or degrade in sunlight
- Low VOC/odor
- Easy to apply via sprayer, T-bar microfiber applicator, or roller
- Anti-graffiti - excellent resistance to solvents
- Safe for countertop use
- Excellent resistance to hot tire pickup

WHERE TO USE

Use on concrete garage floors, driveways, patios, walkways, countertops, pool decks, commercial floors, parking garages, masonry, terrazzo, natural stones, and more.

PACKAGING

Available in matte or gloss
(may be mixed together to create satin)
Concentrate that makes 1.12 gallons & 4.5 gallons

TEST AREA

Performing a test area is advisable to make sure the product is suitable for the surface.

COVERAGE RATES

INTERIOR SURFACES

500 – 1000 square feet per gallon depending on porosity of surface and level of preparation.

EXTERIOR SURFACES

300 - 700 square feet per gallon depending on porosity and texture.

PRODUCT AVAILABILITY

Product is available at retail distributors around the world. Visit the Endurable website to find the nearest distributor.

REGULATORY INFORMATION

VOC CONTENT - <10g/L

USDA - In accordance with USDA regulations 9 CFR, Section 416.4 and the Food Safety Inspection Service's "Sanitation Performance Compliance Guide," **Endurable** issues this statement of assurance: When properly applied, Endurable Concrete Sealer contains no harmful compounds that will contaminate food and meat handling and processing equipment or facilities. In addition, Endurable Concrete Sealer will make concrete floors and walls less porous and easier to clean, creating an environment that is less susceptible to the proliferation of harmful bacteria.

LEED

At less than 10 grams per liter of VOC content, product contributes towards LEED certification.

PREPARATION

Endurable Concrete Sealer may be used on both interior and exterior concrete. Apply to dry, porous concrete. New concrete should be allowed to cure for at least 28 days. All surfaces need to be clean, dry, and free of bond-breaking contaminants. Endurable Surface Cleaner is the recommended product to use for surface preparation. Please refer to the technical data sheet for application instructions of the Endurable Surface Cleaner. ACIDIC OR ALKALINE CLEANERS AND ETCHING PRODUCTS ARE NOT RECOMMENDED.

INTERIOR SURFACE PREPARATION

Before application of sealer, make sure surface is free from dirt, oils, carpet and tile glue, or previous sealers. For optimum results, open troweled concrete mechanically. Diamond grind the surface to a suitable profile. Please refer to grinding specifications on the Endurable website. Repair and grout cracks, pop-outs, and joints with suitable joint and patching compounds.

Hardening: Softer concrete may need to have 1 - 3 applications of Endurable Concrete Hardener depending on hardness of concrete.

Grouting and Joint Repair: Apply suitable joint and grout materials. Grind off excess materials before application of Endurable Concrete Sealer.

EXTERIOR SURFACE PREPARATION

Before application of sealer, make sure the surface is free from dirt, oils, and other sealers. Clean the surface with Endurable Surface Cleaner in conjunction with pressure washing. Use per instruction on the Endurable website. Allow the concrete to dry before application process.

REMOVAL OF EXISTING SEALERS

It is advised to remove all existing sealers with Endurable Power or Vertical Stripper. Follow instructions and videos on how to remove existing sealers at Endurable website.

POLISHED CONCRETE PREPARATION

For polished concrete, follow the Architectural Specification available on the resources menu at Endurable website.

COUNTERTOPS

Endurable Concrete Sealer is an excellent choice for concrete countertops. Follow the interior surface preparation instructions.

MOISTURE TESTING

Performing a moisture test is recommended to determine if the substrate is suitable for sealing with Endurable Concrete Sealer. A Calcium Chloride test or an RH meter may help determine the moisture drive/content of the concrete. A piece 2 mil plastic may also be taped to the surface for approximately 24 hours if no testing equipment is available. A combination of two or more of these tests is recommended for comprehensive analysis.

A Calcium Chloride reading above 5lbs can yield less than desirable results. A reading of 75% or higher on an RH meter can yield less than desirable results.

Coring meters are much more reliable than surface RH meters. Tape a piece of 2 mil plastic on all sides to the surface for 24 hours. If moisture is present after 24 hours, the concrete may have a moisture problem.

If it appears the concrete has a moisture issue, then the problem must be mitigated before the application of sealer. One option to mitigate moisture issues is to use Endurable Concrete Hardener. Spray a minimum of three heavy applications. Wait 24 hours and repeat moisture testing. If problem still exists, repeat application.

PH TESTING

Before Endurable Concrete Sealer is applied it is advisable to test the pH of the concrete. The pH of the concrete should be between 8-10. To test the pH of a concrete surface, use the Endurable pH Pencil. Please refer to the technical data sheet of Endurable pH Pencil for application instructions.

Many concrete cleaners are acidic and leave the surface acidic or alkaline. Improper pH levels in the concrete can prohibit sealers and coatings, including Endurable Concrete Sealer, from curing properly.

MIXING INSTRUCTIONS

For first coat, mix Component 1 with Component 2, then mix with twice as much water as product. (1:2 - fill up the component bottles twice with water.) Subsequent coats, previously sealed, or non-porous surfaces should be mixed at one-part product to one-part water (1:1 - fill up the component bottles once with water.)

Use a drill and paddle at low speed for 30 seconds to 1 minute. Pot life is 45 to 90 minutes for matte and 90 to 180 minutes for gloss. It's beneficial to strain product before use.

IT IS NOT RECOMMENDED TO BREAK DOWN ENDURABLE CONCRETE SEALER KITS. SAMPLE SIZES ARE AVAILABLE FOR SMALLER JOBS.

APPLICATION TOOL OPTIONS

- Pump up sprayer capable of spraying sealer with a .05 to .15 gpm conical tip at 40 psi (maximum .05 - .08 gpm conical tip on smooth or non-porous surfaces)
- T-Bar floor coaters and coater refills
- Microfiber Pad- micro-fiber frame and thin applicator pad
- Roller- ¼ nap roller cover for urethanes
- HVLP (cup gun) for countertop application

APPLICATION INSTRUCTIONS

Make sure substrate is dry before application. Apply 1st coat via pump sprayer. SPRAY EVENLY AND DO NOT OVER APPLY. Spraying the 1st coat over Endurable Concrete Stain will keep the stain residue from moving. Do not apply 2nd coat until 1st coat is completely dry. 2nd coat may be applied via microfiber pad, T-Bar applicator, sprayer, or roller. PRODUCT SHOULD BE MIXED 1 TO 1 WITH WATER ON SECOND OR SUBSEQUENT COATS WHEN APPLYING OVER NON-POROUS OR SMOOTH SURFACES. It must be applied in thin coats. Two coats are usually sufficient, but applicator must determine the specific need. Sealer should be applied between 40 and 90 degrees Fahrenheit. After applying the 1st coat, wait until the sealer is dry to the touch, usually 45 - 180 minutes for matte, 3 - 6 hours for gloss, depending on temperature and air flow, and then subsequent coats may be applied. Subsequent coats typically take 3 - 8 hours to dry for matte and 6 - 24 hours for gloss depending on temperature and air flow. Once the surface is turning milky white, do not apply any additional product. On textured or stamped concrete, the sealer might settle into the lower impressions of the surface. If this happens, simply use a rag or cloth to blot the area so the sealer will cure properly. Do not apply more than 4 mils per coat or the product will not cure out properly. After sealer turns clear, direct or forced air movement across the surface can substantially speed the drying process. Higher temperatures can speed the drying process. Lower temperatures will slow the drying process. After application, tools may be cleaned using soap and water, or acetone. Light traffic is possible after 8 - 24 hours and heavy traffic is possible after 24 - 48 hours. The sealer will gain strength over the next few days after application and will reach full cure in 7 - 10 days. Avoid subjecting the sealer to freezing temperatures or moisture for 12 - 36 hours after application.

APPLICATION INSTRUCTIONS - continued

Only Endurable Vertical Stripper may remove Endurable Concrete Sealer when sealer is fully cured. This requires the stripper to be covered with 2 mil or greater polyethylene and remain wet for a minimum of 12 - 24 hours.

EXTERIOR GLOSS LEVELS

For a higher exterior gloss level, apply a 2nd and 3rd coat of sealer mixed at one-part product to one-part water.

INTERIOR GLOSS LEVELS

For a higher interior gloss level:

Option 1: Apply 2nd and 3rd coats of sealer at one-part product to one-part water.

Option 2: Apply a coat of Endurable Concrete Armor prior to application of sealer.

Option 3: Burnish the sealer. Follow the instructions for "Polishable Coating System" under the "Systems" tab on the Endurable website.

RESEALING

Endurable Concrete Sealer is a long-lasting sealer. When the time comes to reseal the Endurable Concrete Sealer, clean the concrete with Endurable Surface Cleaner.

Exterior Resealing

Apply an even coat on exterior surface mixed at 1:1.

Interior Resealing

Scuff or screen the surface with scuffing pads on a burnisher or floor buffer, or with sanding screens.

Apply a coat of sealer mixed at 1:1.

COLOR SEALING

Endurable Concrete Stain may be mixed into Endurable Concrete Sealer for a “color seal” option. Mix sealer as instructed and add stain concentrate. Add stain depending on desired look. Adding more stain can give a solid look, while adding less may give an accent of color.

STAINING OVER SEALER WITH ACETONE

Endurable Concrete Stain may penetrate Endurable Concrete Sealer when mixed in acetone for the first day or two after application. If applying stain mixed in acetone over sealer, spray VERY lightly. Too much acetone can “cook” the sealer. Upon further curing, the stain cannot penetrate unless an additional coat of product is applied. When applying Endurable Concrete Stain over Endurable Concrete Sealer mixed in acetone, make sure there is no residue on the surface when sealing with a T-Bar, microfiber pad, or roller. Residue may be “moved” over the surface and alter the look of the finished product.

STAINING OVER SEALER WITH WATER

Endurable Concrete Stain mixed in water can be sprayed over Endurable Concrete Sealer that has cured long enough, typically 3 - 8 hours after application depending on porosity and weather conditions. This staining system can deliver durable and vivid results, while using zero solvents. After first coat is applied, apply a second coat in which to apply stain.

COUNTERTOPS

For countertops and self-leveling overlays it is recommended to grind the surface for best results.

Option 1:

1. The sealer is applied.
2. A dry roller is used to remove excess sealer.
3. The surface is lightly sanded.
4. The process is repeated for a total of 3 coats of sealer.

Option 2:

1. An HVLP (cup gun) may be used to apply light, thin coats. Since light coats are required, 3 - 4 are recommended.

SELF-LEVELING OVERLAYS

To seal self-leveling overlays, please refer to the Grind and Seal specification listed on the Endurable website.

TEST DATA

Abrasion Resistance H-18 1000 cycles, mg loss ASTM D 4060 260

Abrasion Resistance CS-17 1000 cycles, mg loss ASTM D 4060 25

Modulus of Elasticity, kpsi ASTM D 638 175-300

Tensile Strength, psi ASTM D 638 4400-7200

Tear Strength, pli ASTM D 624 150-300

Artificial Weathering ASTM D 4587 None

VOC Content ASTM D3960 < 1%, < 10 gL

Pendulum Hardness Test ASTM D4366 1 Day - Matte- 38 seconds/Gloss-38 seconds

Pendulum Hardness Test ASTM D4366 5 Day - Matte- 154 seconds/Gloss-174 seconds

Pendulum Hardness Test ASTM D4366 7 Day - Matte-162 seconds/Gloss-184 seconds

Coefficient of Friction Test ASTM D-2047 Dry -- 0.6 Wet -- 0.47

Water Vapor Transmission ASTM E 96 1.26 grains/hour/square foot

CHEMICAL RESISTANCE ASTM D1308

Product cured for 14 days at 70 degrees Fahrenheit before testing

CHEMICAL Time - 4 hours, 24 hours

Betadine - No Effect, No Effect

Bleach - No Effect, No Effect

Gasoline - No Effect, No Effect

Acetic Acid- No Effect, No Effect

Water - No Effect, No Effect

MEK (complete immersion) - Slightly Soft, Slightly Soft

Brake Fluid - No Effect, Slightly Soft

H_2SO_4 - No Effect, No Effect

IPA - No Effect, Slightly Soft

HCl - No Effect, No Effect

Skydrol - No Effect, No Effect

NaOH - No Effect, No Effect

NH_4OH - No Effect, No Effect

SLIP RESISTANCE AND CLEANABILITY

The profile of the concrete will dramatically affect the slip-resistance. Aggressive finishes, such as broom-finished concrete, will yield the best coefficient of friction but will be slightly more challenging to clean. Smooth surfaces will yield a lower coefficient of friction but are easier to clean. For additional slip resistance, 60 to 100 mesh polypropylene, sand, or aluminum oxide should be broadcast into the second coat of sealer. When slip-resistant additive is used, it is recommended to mix the sealer 1:1 with water. It is recommended to apply a third coat of sealer to completely encapsulate and protect the additive.

MAINTENANCE

Use Endurable Surface Cleaner to clean as needed. Reseal as necessary - 5 to 10 years depending on traffic and usage. Routine buffing with a light pad on a low-speed buffer or burnisher can help maintain an even sheen and a clean surface. The floor may be buffed/burnished with polish and cleaning pads. Rougher pads with heavy machines can cause more wear on the sealer. 1500 grit pads or above may be used after the sealer has fully cured. If the floor has a non-slip additive, it is highly recommended to clean by spraying the Endurable Surface Cleaner and let it dwell. Do not let the cleaner dry before removal. Rinsing with water to the drains is recom-mended. Excessive floor cleaning with a Floor Scrubber can lead to faster degradation of the non-slip additive. Excessive abuse with highly caustic chemicals can lead to a premature degradation of the sealer or may change the look or decorative nature. If reapplication of the sealer is needed, the floor should be cleaned and scuffed before a new application of Endurable Concrete Sealer is applied.

LIMITATIONS

Product should be applied in thin coats. Do not over-apply. Product must be applied to clean, dry substrates. It is recommended to apply to porous surfaces for longest-lasting results. Product should not be applied to concrete with moisture related issues. It is not advisable to apply any type of tape to the Endurable Concrete Sealer.

WARRANTY

Evaluate whether this product is suitable for the intended application. Conditions of product use are outside of Endurable's control and vary widely, the following is made in lieu of all express or implied warranties of merchantability: Endurable's only obligation and the customer's only remedy are replacement of product, at the option of Endurable. In no case will Endurable be liable for any direct, indirect, special, incidental, or consequen-tial damages including lost profits, goodwill, or business opportunity.

TECHNICAL ASSISTANCE

For technical questions or support, call 800-910-3120 ext. 1 between the hours of 8:30 am to 4:30 pm PST.

STORAGE AND SHELF LIFE

Product has a shelf life of a minimum of 1 year in original containers. Store product between 40 and 77 degrees Fahrenheit. Keep product free from excessive heat, moisture, and freezing. If component 2 appears thick or clumpy when dispensing into a bucket, product may have expired or has been left in excess heat for a period of time. DO NOT USE IF THIS HAPPENS. CALL 800-910-3120 EXT 1.

SAFETY

Use with proper ventilation. May cause eye and skin irritation. If you experience headaches, dizziness, or watery eyes, you may wear a NIOSH TC-84 respirator during application. As with any chemical, respirators, eye protection, and gloves are recommended.