

ENDURABLE F1 SEALER

Endurable F1 Sealer is great replacement for solvent-based acrylic sealers. Product has a low VOC content and is extremely easy to apply. The innovative chemistry used to create this sealer provides a product that lasts twice as long as most acrylics.

ADVANTAGES

- Quick to dry
- Spray, roll, or micro-fiber application
- Safe for countertops
- Low VOC content and low odor
- Good chemical resistance
- Good durability
- Very easy to apply
- Good UV stability
- Good against hot tire pick-up
- Excellent product to use in conjunction with Endurable Concrete Sealer. Application of product during recoat window over Endurable Concrete Sealer results in rich look usually achieved with floor wax yet yielding much longer term results

WHERE TO USE

Concrete - garages, driveways, patios, walkways, countertops, pool decks, commercial floors, parking garages, masonry, terrazzo, natural stones, and more

PACKAGING

Product is available in 1-gallon or 2-gallon concentrates.

TEST AREA

Performing a test area is advisable to make sure the product is suitable for your 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 - <100g/L

USDA - In accordance with USDA regulations 9 CFR, Section 416.4 and the Food Safety Inspection Service's "Sanitation Performance Compliance Guide," HDIP INC issues this statement of assurance: When properly applied, Endurable F1 Sealer™ contains no harmful compounds that will contaminate food and meat handling and processing equipment or facilities. In addition, product 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 100 g/L of VOC content, product contributes towards LEED certification.

PREPARATION

Endurable F1 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 the Endurable Grind and Seal System specification 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 F1 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 advisable to remove all existing sealers with Endurable Power or Vertical Stripper. Follow the instructions and videos on how to remove existing sealers available at the Endurable website.

POLISHED CONCRETE PREPARATION

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

COUNTERTOPS

Endurable F1 Sealer is a good choice for concrete countertops. Follow the interior surface preparation instructions.

MOISTURE TESTING

Performing moisture testing is recommended to determine if the substrate is suitable for sealing with Endurable F1 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 of Endurable Concrete Hardener until problem is mitigated.

PH TESTING

Before Endurable F1 Sealer is applied it is advisable to test the pH of the concrete. The pH of the concrete should be between 8 and 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 or alkaline and leave the surface acidic or alkaline. Improper pH levels in the concrete can prohibit sealers and coatings, including Endurable F1 Sealer, from curing properly.

MIXING INSTRUCTIONS

Mix 1 to 1 with water. Use a mixing drill and paddle. Product may be applied via pump sprayer with a conical tip that sprays at .05 to .15 gpm at 40 psi, airless sprayer, micro-fiber applicator, or roller. Product may be used without adding water. Eliminating water will speed dry time.

Use a drill and paddle at low speed for minimum of 2 minutes. It may be beneficial to strain product before use.

IT IS NOT RECOMMENDED TO BREAK DOWN ENDURABLE F1 SEALER JUGS. 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 (on smooth surface concrete use a maximum .05 - .08 gpm conical tip)
- T-Bar floor coaters and coater refills
- Microfiber Pad
- Roller- ¼ nap roller cover for urethanes
- HVLP (cup gun) for countertop application

APPLICATION INSTRUCTIONS

Apply first coat via pump sprayer. **SPRAY EVENLY AND DO NOT OVER APPLY.** Spraying the first coat over Endurable Concrete Stain will keep the stain residue from moving. Do not apply second coat until first coat is completely dry. Second coat may be applied via microfiber pad, T-Bar applicator, sprayer, or roller. It must be applied in thin coats. Two coats are usually sufficient, but applicator must determine the specific need. Sealer should be applied at 40 - 90 degrees Fahrenheit. After applying the first coat, wait until the sealer is dry to the touch, usually 15 - 60 minutes depending on temperature and air flow. Once the surface is turning milky white there is enough product. Subsequent coats typically take 20 - 40 minutes to dry, depending on temperature and air flow.

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 may 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 2 hours and heavy traffic is possible after 8 hours. The sealer will gain strength over the next few days after application and will reach full cure in 5 - 7 days. Avoid subjecting the sealer to freezing temperatures or moisture for 12 - 36 hours after application. Make sure substrate is dry before application.

EXTERIOR GLOSS LEVELS

For a higher exterior gloss level, apply a second and third coat of sealer mixed at one-part product to one-part water.

...continued on next page

INTERIOR GLOSS LEVELS

For a higher interior gloss level:

- Option 1: Apply second and third coats of sealer and/or do not dilute concentrate with water.
- Option 2: Apply a coat of Endurable Concrete Armor prior to application of sealer.
- Option 3: Follow the specification “Endurable Grind and Seal” at Endurable website.

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 Endurable Grind and Seal specification on the Endurable website.

RESEALING

Endurable F1 sealer is a long-lasting sealer. When the time comes to reseal the Endurable F1 Sealer, clean the concrete with Endurable Surface Cleaner. When dry, apply an even coat on exterior surface mixed at 1:1 with water. When applying to interior surfaces, scuff or screen the surface with scuffing pads on a burnisher or floor buffer, or with sanding screens. Clean the surface with Endurable Surface Cleaner and apply a coat of sealer mixed at 1:1 with water.

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 and 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, sands, or aluminum oxide should be broadcast into the second coat of sealer. 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 2 to 5 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 recommended. 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 F1 is applied.

DURABILITY AND CHEMICAL TESTING

Adhesion ASTM D3359 Dry Tape - 5A

Adhesion Wet Tape (24 hr @ 70 degrees F) - 5A

Adhesion Wet Tape (100 hr @ 70 degrees F) - 5B

Adhesion ASTM D2197A Dry Scrape - 8

**Immersion ASTM D870 Water (24 hr @ 70 degrees F)
- No Effect**

Double Rubs ASTM D4752 IPA >100

Double Rubs ASTM D4752 MEK >100

Impact Resistance ASTM D2794 Reverse, in-lb >160

Gloss, 60 degrees ASTM D523 >95

Hardness ASTM D4366 Persoz, s >150

Mandrel Bend ASTM D1737 mm - 3.2

STORAGE AND SHELF LIFE

Product has a shelf life of a minimum of 1 year in original containers. Store product between 40 to 80 degrees Fahrenheit. Keep product free from excessive heat, moisture, and freezing. If product appears thick or clumpy when dispensing into a bucket, product may have expired or has been left in excess heat or frozen 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 an Organic Vapor Respirator. As with any chemical, respirators, eye protection, and gloves are recommended.

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 F1 Sealer.

WARRANTY

Evaluate whether this product is suitable for your intended application. Conditions of product use are outside of our control and vary widely, the following is made in lieu of all express or implied warranties of merchantability: Our only obligation and your 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 consequential 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.