



Product Information

EnduraFlake HB4

High Build Epoxy Primer – 4 Hr. Dry

Description

The EnduraFlake HB4 is a two component, 100% solids, low viscosity, moisture tolerant, fast drying, high strength, and multi-purpose epoxy primers. When applied in ambient conditions (77°F and 50% humidity), EnduraFlake HB4 will be dry to touch within 4-5 hours.

Uses

The EnduraFlake HB4 series epoxy primer is used to prime concrete, metal and wood as well as many other existing coatings. It is an excellent all around concrete primer/sealer.

Advantages

- Meets USDA criteria
- 100% Solids
- Chemical Resistant
- High Build
- Moisture Tolerant
- Convenient 2:1 Mix; A:B=2:1
- High Strength
- Superior Adhesion

Coverage

ENDURAFLAKE HB4 should cover between 200-300 sq ft per gallon under normal conditions, which will achieve 5.2-8.0 dry mils. EnduraFlake HB4 may be applied at a heavier rate to achieve a higher build system or to accommodate the broadcasting of aggregates.

Colors

Available clear and pigmented.

Packaging

1 1/2 gallon kits
(1 gallon part A to 1/2 gallon part B)
15 gallon kits
(10 gallons part A to 5 gallons part B)

Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper adhesion. The concrete should be at least 2500 psi and feel like 30-grit sandpaper. The concrete should be porous and be able to absorb

water. A minimum of 28 days cured is required on all concrete. Relative humidity in the concrete floor slab should be below 80% (per ASTM F-2170).

Before starting flooring work, test existing concrete slab to make sure there is no efflorescence or high levels of alkalinity. Alkalinity refers to a high pH reading which means the floor is not neutral. A high alkaline environment can cause salts to creep up through the cement called efflorescence. These salts have a tendency to prevent or destroy the bonding of coatings to the concrete. The most common form of testing is the use of a wide-range pH paper or tape. Make sure the floors pH reading ranges between 5-9 to ensure adhesion. The testing of concrete for alkalinity can show the amount of alkalinity only at the time the test is ran, and cannot be used to predict long-term conditions.

Calcium chloride tests should be conducted to determine if the concrete is sufficiently dry for an epoxy flooring installation. The calcium chloride tests should be conducted in accordance with the latest edition of ASTM F 1869, Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. When running a calcium chloride test, it is important to remove any grease, oil, curing agents, etc. so accurate readings can be obtained. A rate of 4.5lbs/1000 ft²/24hr period or less is an acceptable amount of vapor pressure for an epoxy flooring installation. If the reading ranges from 4.5lbs to 15lbs, a moisture barrier system such as our E.W. INDUSTRIES Epoxy Primer can be installed to reduce the emissions.

Failing to adhere to these strict guidelines can result in product delamination, discoloration, blistering, or all together failure of the coating system. Testing is the responsibility of the applicator. E.W. Industries bears no responsibility for failures due to any of the above conditions.

Surface Preparation

Over Concrete Surfaces: Shotblasting or diamond grinding is the preferred method for preparing the concrete. Proper preparation should achieve a clean, porous, and uniform surface that feels like 50 grit sandpaper that will allow the product will soak in and

properly bond.

Over existing E.W. INDUSTRIES Epoxy: Sand the surface with a floor buffer and 100 grit sandpaper. Remove debris and wipe with acetone just before new application. Always test a small area to ensure adhesion prior to application.

Mixing

As a primer: Mix 2 parts A with 1 part B (by volume) together for 3 to 4 minutes. For best penetration into concrete, thin by adding up to 1 quart of acetone to each 1.5 gallon kit. Thinned material must be applied at less than 5 mils (and not puddle) to cure properly.

Working Time

ENDURAFLAKE HB4 = 17-23 minutes

Application

As a primer: Immediately after mixing, spread a strip of the batch onto the surface along the edges where it will be cut in using a brush. Pour the remaining material near the cut in area and spread evenly using a trowel or squeegee and back roll using a 3/8" nap non-shedding roller. Thinned material must be applied at less than 5 mils (and not puddled) to cure properly.

As a mortar: Prime the surface using the methods described above. Mix 2 parts A & 1 part B of epoxy then combine 2 to 5 parts of oven-dried aggregate. *Spread, gage rake and trowel into place* the prepared epoxy mortar using a trowel. In order to smooth and level the mortar, clean the trowel with a solvent as you go.

As an intermediate coat: Mix and apply without solvent at the desired thickness using a notched trowel or squeegee and backroll. The addition of silica flour or silica sand will add body and help to build up more cost effectively.

Drying Time

ENDURAFLAKE HB4 Primer can be re-coated as soon as the surface is dry to touch, generally 4 hrs. Recoat within 24 hrs. If additional coats need to be put down after the initial 24 hr window, sand the surface and wipe it with a suitable solvent (i.e. acetone)

ENDURAFLAKE HB4: 4 hours dry, light foot traffic may be permitted in 12 hours, vehicular traffic in 48 hours

All times are based on average temperature of 77°F and 50% humidity. Cooler temperatures will increase drying time.

Limitations

- Do not apply at temperatures below 50°F or above 95°F.
- Do not let mixed product sit in bucket for prolonged period of time or it will become very hot and unusable.
- Do not apply over concrete with Moisture Vapor Emissions above 4.5lbs/1000 ft²/24hr.
- For interior use only unless protected by a pigmented UV resistant coating.
- Concrete must be cured for a minimum of 28 days.
- Solvents added to thin such as acetone will make product combustible or flammable in which case be aware of sparks or open flame.
- If solvent is added, the product must be applied thinly (300+ ft²/gal to allow the solvent to escape and proper curing to occur.
- Shelf Life of this material is 1 year from the date of manufacture. (See batch number for manufactured date)
- E.W. Industries recommends the use of angular slip resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards.

Clean Up

Uncured material can be removed with a solvent. Cured material can only be removed mechanically. All empty containers must be disposed of according to local, state, and federal regulations.

Warranty

E.W. Industries Enterprises guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. E.W. Industries makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product. Manufacturer shall not be liable for material used outside of its shelf life. For product dating, please refer to the batch number on the product or contact E.W. Industries.

Technical Data for ENDURAFLAKE HB4

Chemical Composition	Modified Bisphenol A, Modified Amidoamine
Viscosity	1600-1800 cps
Gel Time	35 @77°F (150 mass/mins.)
Tensile Strength	7550 psi
Tensile Elongation	5.3%
Shore D Hardness	83
Abrasion Resistance @1000 cycles Wt Loss, (gms)	0.036
Mar Resistance, KG	1.3
Pencil Hardness	3H
Impact Resistance, inch-lbs Direct/Reverse	15/2
<u>Glass Transition Temperature</u>	<u>48°C</u>
Thin Film Set Time	4 hrs. @70°F
Flexural Strength	11,185 psi
Flexural Modulus	445,000 psi
Compressive Modulus	375,000 psi
Compressive Strength @ yield	11,355 psi
Cross Hatch Adhesion (0-Worst, 5-Best)	5
Pot life	16 minutes (8oz. (250g) at 77°F
VOC	0 g/l

*Properties determined after 7 days cure at 25 C°

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