

EPOXY COAT
DURABLE RESINS & HARDENERS

Flex Epoxy System

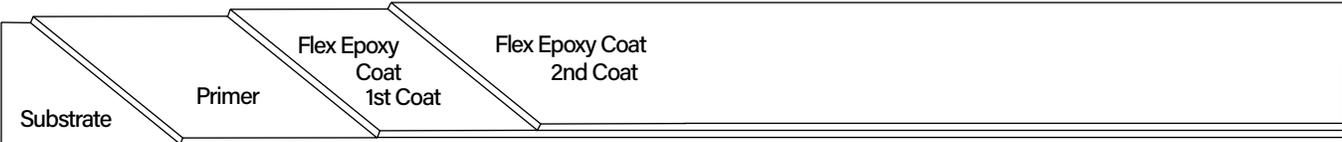
Description

Westcoat's Flex Epoxy System is a low odor, low VOC, flexible epoxy system. The Flex Epoxy System is designed to perform as a fluid proofing, waterproofing and crack isolation membrane for concrete or plywood substrates.

Uses

The Flex Epoxy System is suitable for mechanical and equipment rooms, commercial kitchens, hospitals, bathrooms, clean rooms, shopping malls, mezzanines and on concrete substrates located above occupied spaces. The Flex Epoxy System can also be used as a membrane underneath a variety of Westcoat's systems when waterproofing, sound dampening and crack isolation attributes are required.

System Overview



System Data			
Coverages	Primer 250-300 ft ² per gallon	Flex Epoxy Coat - 1st Coat 50-80 ft ² per gallon	Flex Epoxy Coat - 2nd Coat 50-80 ft ² per gallon
Components	EC-75 Epoxy Flex Gel Patch EC-12 Epoxy Primer EC-44 Flex Epoxy		Shelf Life 2 years 2 years 2 years

Advantages

USDA Compliant • Chemical Resistant • Low Viscosity • 100% Solids • Low Odor • Pigmented • Medium Build • Seamless • Easy Clean Up • Superior Adhesion • High Strength • Slip Resistant Textures Available

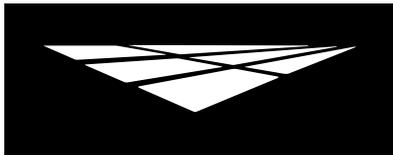
Inspection

The surface must be structurally sound, clean, dry and free of grease, paint, oil, dust, curing agents, laitance or any foreign material that will prevent proper adhesion. The concrete should be at least 2,500 PSI and porous or rough enough to allow the product to soak in. A minimum of 28 days curing time is required on all concrete. Prior to starting work, test existing concrete slab for efflorescence, moisture and hydrostatic pressure.

Plywood must be a minimum of 1 inch thick or 2 sheets of at least 5/8 inch CDX or exterior grade plywood, but AC-X is preferred. The plywood must be glued and screwed and have a maximum joist span of 12 inches. The decks should meet local building codes. OSB is not recognized as a suitable substrate.

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Preparation

Pre-cut and clean all cracks and joints with a concrete diamond blade to at least ¼ x ¼ inch. Prepare concrete to a profile equal to CSP 3-4 as specified by ICRI. Methods may vary according to the condition and hardness of the concrete. Other factors include the forecasted use of the surface and the environment in which it is to be installed. When preparing the surface use caution when shot blasting, scarifying too aggressively, leaving grind marks or grinding too smooth.

On plywood, be sure the surface is clean, dry and free of grease, paint, oil, dust or any foreign material that may prevent proper adhesion.

Moisture

All concrete should be tested for moisture before applying a seamless coating. If moisture emissions exceed 5 lbs/1000 square feet (ASTM F1869) or if the relative humidity (RH) exceeds 75% (ASTM F2170), please refer to the EC-15 Moisture Vapor Barrier Product Specification Sheet.

Crack Treatment

Mix 1 part A with 1 part B (by volume) of EC-75 Epoxy Flex Gel Patch together for 3-4 minutes and apply to the crack using a trowel or putty knife. Patch all spalls and cracks with EC-75 and allow to dry 2-3 hours before priming. The material may be slightly overfilled in the crack and when completely dry (in 4-6 hours) can be sanded or ground smooth. This remedial approach to patch cracks is not guaranteed and it should be noted that when the substrate moves, it could likely crack the Flex Epoxy System.

Concrete Repair

For concrete that needs repairs beyond just dormant cracks, TC-23 Mortar Mix can be used. TC-23 is designed to be used as a general concrete repair mix for horizontal and vertical applications and can be used as a patching/underlayment material under most Westcoat systems. Please refer to the TC-23 Mortar Mix Product Specification Sheet for details.

Plywood Seams

Seams should be dry and free of debris. WP-47A-00-100 Seam Tape should be installed over all seams. Mix 1 part A with 1 part B (by volume) of EC-75 Epoxy Flex Gel Patch together for 3-4 minutes and apply to the seam using a trowel or putty knife to smooth. Allow the EC-75 to fully dry (typically 2-4 hours) before applying the primer.

Primer

Mix 2 parts A with 1 part B (by volume) of EC-12 Epoxy Primer together for 3-4 minutes. For best penetration into concrete, thin by adding 1-2 quarts of Westcoat's CA-23 to each 1½ gallon kit. Thinned material must be applied at less than 5 mils. To cure properly, do not allow product to puddle. Immediately apply at a rate of 250-300 square feet per gallon, using a trowel or squeegee and then back roll to ensure complete coverage. Once dry, the EC-12 should be coated within 24 hours. If delay occurs beyond 24 hours, it is recommended that the surface be sanded and wiped with denatured alcohol.

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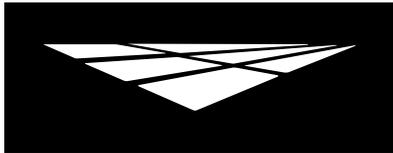


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Premix each component separately. For color consistency, box all Part A's. In a clean bucket, mix 2 Parts A with 1 Part B (by volume) of EC-44. Mix thoroughly with a low speed (400-600 rpm) drill motor for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing. Immediately after mixing, remove the material from the container, as the epoxy will begin to generate heat. Apply EC-44 at a rate of 50-80 square feet per gallon with a trowel or squeegee and back roll with an epoxy-rated, non-shedding $\frac{3}{8}$ inch roller cover. For use as a finished floor, two coats at 50 square feet per gallon are required. Additional coats may be needed, depending on the substrate and desired finish. A mockup should be performed, prior to the application.

Please note: for waterproofing requirements, a two coat application of 50-80 square feet per gallon per coat is required. If additional coats are desired, they must be applied within 24 hours or the cured material must be sanded and wiped with acetone, before application. Prohibit traffic on floor for 48 hours after installation. Avoid heavy abrasion and chemical exposure for 5 days. Allow 72 hours minimum for vehicular traffic.

Optional Materials

Skid Resistance

- CA-30 Small Safe Grip or CA-31 Large Safe Grip can be added to the EC-44 to produce a skid-resistant surface.
- CA-33 Aluminum Oxide can be used for skid resistance in heavy traffic areas.

Cement Options

- TC-23 Mortar Mix may be used as a general concrete repair mix for horizontal and vertical applications and can be used as a patching/underlayment material.

Additional Topcoat

- EC-95G Gloss Polyurethane Topcoat can be applied over the epoxy within 24 hours to improve chemical abrasion and UV resistance, as well as gloss.
- EC-101 Polyaspartic 100% Solids may be used as a non-yellowing, high gloss, quick drying, high build, mar and chemical resistant finish with outstanding wear resistance.
- EC-102 Polyaspartic is recommended when tire staining is a concern and also provides a quick drying, UV resistant, high gloss, high build, mar and chemical resistant finish.
- SC-65SG WB Semi-Gloss Polyurethane Sealer can be applied over the EC-44 within 24 hours to improve chemical, abrasion and UV resistance and offers a low odor, non-flammable, low VOC option.

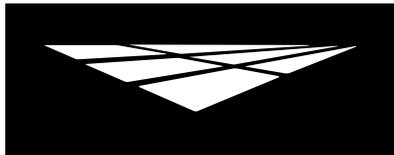
* Please refer to Product and System Specification Sheets for additional information.

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Clean Up

Uncured material can be removed with solvent. If cured, material can only be removed mechanically or with an environmentally-safe solvent.

Maintenance

Interior Floors can be dust mopped daily or mopped using a neutral pH cleaner. For more information on floor care and maintenance, please refer to the General Maintenance sheet.

The Flex Epoxy System should be inspected for wear every 2 to 4 years. The system should be resealed with the appropriate Westcoat topcoat every 3 to 5 years depending upon traffic and UV exposure. Contact the original Installer of Westcoat for complete re-coating instructions.

Health Precautions

Inhalation of vapor or mist can cause headache, nausea, irritation of nose, throat and lungs. Avoid breathing vapors. It is strongly recommended that respirators are worn. Prolonged or repeated skin contact can cause slight skin irritation. All epoxies have the potential of causing skin irritations or allergic reactions. Be careful not to get on skin, clothes or in eyes. Gloves are strongly recommended. If splashed in the eye, flush with warm water and contact a physician if blurring persists.

Solvent based products are extremely flammable. Extinguish all pilot lights and sources of ignition, such as electrical motors. Be sure to have adequate cross ventilation prior to installing.

Limitations

- This system is designed for professional use only.
- Read Product Specification Sheets for every product you will be using before beginning the project.
- Be sure to do adequate surface preparation.
- Be sure to measure and mix properly.
- For interior use only.
- Test for moisture in concrete and vapor drive.
- Be aware of the pot life of mixed material.
- Do not apply in temperatures below 50°F or temperatures above 90°F. Cooler temperatures will cause slower dry times.
- Thinly applied coatings may not hide epoxy patches, rough concrete or shotblast tracks.
- Heavier topcoat may become slippery.
- Approval and verification of proposed colors, textures and slip resistance is recommended.
- Do not allow Westcoat products to freeze.

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Slip Precaution

Westcoat Specialty Coatings Systems highly recommends the use of a slip-resistant additive to all coatings/systems that may be exposed to wet, oily, greasy or slippery conditions. It is the end user's responsibility to provide a flooring system that meets current safety standards. Westcoat and its distributors will not be responsible for injury incurred during a slip and fall incident. For the current coefficient of friction requirements, please consult your local building codes.

Technical Data

ASTM / Test Data	Flex Epoxy System
Tensile Properties (ASTM D638)	Strength - Neat Epoxy 2,500 psi, Elongation - Neat Epoxy 32% (7 day cure)
Flexural Properties (ASTM D790)	N/A
Slant Shear Strength (ASTM C882)	>3,500 psi 100% concrete failure 72°F (14 day cure)
Compressive Strength (ASTM D695)	15,500 psi - 7 day cure unfilled neat
Hardness (Indentation - ASTM D2240)	60 Shore D - 14 day cure
Indentation (Load - Mil-D-3134, Para. 4.7.4.2.1)	0.15 - 14 day cure Method: 1 in. diameter steel ram steadily applies a load of 2,000 lbs for 30 min on the test specimen that is placed on the concrete.
Adhesion to Concrete (Tensile Pull - ACI 503 R)	350 psi (100% concrete failure)
Pull-Off Adhesion Strength on Concrete (ASTM 7234)	>1600 psi (test equip max reading) - 20mm Dowels
Abrasion Resistance (Taber - ASTM D4060)	60 mg. 1000 cycles, 1000 g. load, Wheel No. 17 14 day cure
Water Absorption (ASTM D570)	2 hr. boil, 24 hr = 0.10%
Coefficient of Thermal Expansion (ASTM D696)	20.0 x 10 ⁻⁶ in. / in. / °F (14 day cure)
Fungus & Bacteria Growth (Mil-F-52505, 4.4.2.11)	Will not support growth of fungus or bacteria when subjected to mildew and bacteria tests
Thermal Shock Resistance (ASTM C-884)	Pass
Abrasion Resistance (ASTM C-501)	30 mg w/EC-95 as topcoat
Impact Flexibility (ASTM D6905)	Pass @ 120 in/lb
LEED EQ Credit 4.1	Meets
LEED EQ Credit 4.2	Meets
Temperature Resistance	Continuous exposure: 140°F Intermittent exposure: 200°F
Flammability Rate of Burning (ASTM D635)	Free film "not classified", over concrete will not sustain a flame
Flame Spread (ASTM E-84/NFPA 255)	NFPA Class B
Critical Radiant Flux (ASTM E648)	Class I

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