



# **SYSTEM SPECIFICATION**



# Thin Film

100% Solids

## Description

Westcoat's 100% Solids Thin Film System is an epoxy floor coating which provides a thin to medium build system that is tough, chemical resistant and durable. This system is installed using a 100% Solids epoxy.

#### Uses

The 100% Solids Thin Film System is designed to be used on showroom floors, restaurant floors, garage floors, recreation rooms, washrooms and commercial kitchens. Thin Film is a decorative, durable and chemical resistant coating which makes it perfect for residential, commercial and industrial applications. The 100% Solids Thin Film System is designed to be used as a light duty coating.

#### **System Overview**



System Data			
Coverages	Primer 250-300 ft <sup>2</sup> per gallon	Topcoat 100-200 ft <sup>2</sup> per gallon	
Components	EC-72 Epoxy Patch Gel EC-12 Epoxy Primer EC-34 Epoxy Topcoat		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.







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## **Preparation**

Pre-cut and clean all cracks and joints with a concrete diamond blade to at least  $\frac{1}{4}$  x  $\frac{1}{4}$  inch. Prepare concrete to a profile equal to CSP 2-3 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.

#### 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-72 Epoxy Patch Gel together for 3-4 minutes and apply to the crack using a trowel or putty knife. Patch all spalls and cracks with EC-72 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. If desired, use EC-76 Cove Gel to create cove at the wall to deck transition. Cove may be created using a cove tool. This remedial approach to patch cracks is not guaranteed and it should be noted that when the substrate moves, it could likely crack the 100% Solids Thin Film 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.

## 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. Be sure to apply up cove to termination point.







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## **Topcoat**

Mix 2 parts A and 1 part B (by volume) of EC-34 Epoxy Topcoat for 3-4 minutes. For color consistency, box all part A's. Apply at a rate of 100-200 square feet per gallon (8-16 mils) using a notched squeegee or trowel and back roll using a high quality, non-shedding 1/4 to 3/8 inch nap roller.

An additional topcoat of EC-34 may be applied, as desired. Apply at a rate of 300-400 square feet per gallon. 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**

## **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.

#### Skid Resistance

- CA-30 Small Safe Grip or CA-31 Large Safe Grip can be added to the EC-34 to produce a skidresistant surface.
- CA-33 Aluminum Oxide can be used for skid resistance in heavy traffic areas.

#### Topcoat

• For smaller projects, EC-36 100% Solids Epoxy plus the desired CA-36 Epoxy Color Pack can be used in lieu of EC-34 for the Topcoat.

#### **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.
- EC-50 Novolac may be used as a final topcoat for extreme chemical or heat conditions.

#### Clean Up

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



<sup>\*</sup> Please refer to Product and System Specification Sheets for additional information.





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#### 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 Thin Film 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.

## **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.







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## **Technical Data**

ASTM / Test Data	Westcoat Thin Film - 100% Solids
Tensile Properties (ASTM D638)	Strength - Neat Epoxy 4,000 psi, Elongation - Neat Epoxy 12% (7 day cure)
Flexural Properties (ASTM D790)	7,700 (7 day), ASTM D790, 320,000 psi, D790 Flexural Modulas
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)	80 Shore D - 14 day cure
Indentation (Load - Mil-D-3134, Para. 4.7.4.2.1)	0.008 in indentation - 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.
Indentation (Impact - Mil-D-3134, Para. 4.7.3)	0.015 indentation - 14 day cure
	Method: 2 lb steel ball is dropped twice from an 8 ft. height., Value - 0.012 in. indentation)
Adhesion to Concrete (Tensile Pull - ACI 503 R)	350 psi (100% concrete failure)
Pull-Off Adhesion Strength on Concrete (ASTM 7234)	>3200 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

