



**westcoat**<sup>®</sup>  
SPECIALTY COATING SYSTEMS

**SYSTEM  
SPECIFICATION**

**EC**

**EPOXY COAT**  
DURABLE RESINS & HARDENERS

**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		
<b>Coverages</b>	<b>Primer</b> 250-300 ft <sup>2</sup> per gallon	<b>Topcoat</b> 100-200 ft <sup>2</sup> per gallon
<b>Components</b>	<a href="#">EC-72 Epoxy Patch Gel</a> <a href="#">EC-12 Epoxy Primer</a> <a href="#">EC-34 Epoxy Topcoat</a>	<b>Shelf Life</b> 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**

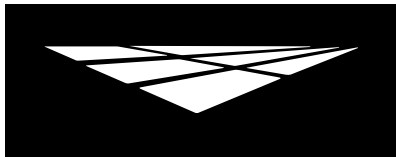
The surface must be structurally sound, clean, dry and free of grease, paint, oil, dust, curing agents, laitance or any foreign material that will prevent proper adhesion. The concrete should be at least 2,500 PSI and porous or rough enough to allow the product to soak in. A minimum of 28 days curing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

DISCLAIMER: PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST THE MANUFACTURER OF WESTCOAT, SHALL BE LIMITED SOLELY TO THE REPLACEMENT OF ANY DEFECTIVE MATERIAL OR A PAYMENT BY THE MANUFACTURER IN AN AMOUNT EQUAL TO THE COST OF THE ORIGINAL MATERIAL.



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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 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

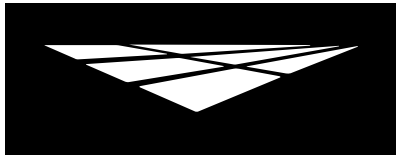
Mix 2 parts A with 1 part B (by volume) of EC-12 Epoxy Primer together for 3-4 minutes. For best penetration into concrete, thin by adding 1-2 quarts of Westcoat's CA-23 to each 1½ gallon kit. Thinned material must be applied at less than 5 mils. To cure properly, do not allow product to puddle. Immediately 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 ¼ to ⅜ 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 skid-resistant 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.

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

### Clean Up

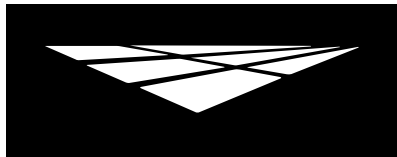
Uncured material can be removed with solvent. If cured, material can only be removed mechanically or with an environmentally-safe solvent.

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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**

<b>ASTM / Test Data</b>	<b>Westcoat Thin Film - 100% Solids</b>
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 Modulus
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 <sup>-6</sup> 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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## SECTION 099656

### EPOXY FLOOR COATINGS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section includes: Provide a complete epoxy floor system for concrete surfaces that meet the requirements for specific use indicated in the contract documents. Include all applicable substrate testing, surface preparation, and detail work.

##### 1.02 RELATED SECTIONS

- A. Section 033000 – Cast-In-Place Concrete
- B. Section 090000 – Finishes
- C. Section 096723 – Resinous Flooring

##### 1.03 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Submit manufacturer's product data sheets on each product and system to be used including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements.
  - 3. Installation methods.
  - 4. Maintenance requirements.
- C. Selection Samples: For each system specified, provide two sets of samples and color charts, representing manufacturer's full range of colors and patterns.

##### 1.04 QUALITY ASSURANCE

- A. All materials used in the epoxy floor system shall be manufactured and provided by a single manufacturer to ensure compatibility and proper bonding.
- B. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this section.
- C. Contractor shall have a minimum of 3 years experience installing epoxy floor coatings similar to that which is required for this project and who is acceptable to the manufacturer.
  - 1. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.
  - 2. Contractor must show and have QCA Qualified Contractor/Applicator paperwork from the manufacturer of the coating system, as required to obtain a long-term jobsite specific warranty.
- D. Convene a pre-application meeting before the start of application of coating system. Require attendance of parties directly affecting work of this section, including: Architect, contractor, applicator, and authorized representative of the coating system manufacturer and interfacing trades. Review the following:
  - 1. Drawings and specifications affecting work of this section.
  - 2. Protection of adjacent surfaces.
  - 3. Surface preparation and substrate conditions.
  - 4. Application.
  - 5. Field quality control.

6. Protection of coating system.
7. Repair of coating system.
8. Coordination with other work.

#### 1.05 DELIVERY, STORAGE & HANDLING

- A. Delivery: Materials shall be delivered to the job site in sealed, undamaged containers. Each container shall be clearly marked with manufacturer's label showing type of material, color, and lot number.
- B. Storage: Store all materials in a clean, dry place with a temperature range in accordance with manufacturer's instructions.
- C. Handling: Handle products carefully to avoid damage to the containers. Read all labels and Material Safety Data Sheets prior to use.

#### 1.06 PROJECT SITE CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within the limits recommended by the manufacturer.
- B. 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), see EC-15 Moisture Vapor Barrier product specification.
- C. Concrete must be at least 2500 psi.
- D. Concrete must be cured for a minimum of 28 days before coating is applied.
- E. Schedule coating work to avoid excessive dust and airborne contaminants. Protect work areas from excessive dust and airborne contaminants during coating application.
- F. Before any work is started, the applicator shall examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner or general contractor shall be notified in writing and any corrections necessary shall be made.

#### 1.07 WARRANTY

- A. Upon completion of the work in this section provide a written warranty from the manufacturer against defects of materials for a period of 1 (one) year. To obtain project specific warranty the coating system applicator must be a Westcoat Qualified Contractor/ Applicator and apply for warranty.

### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS

- A. Acceptable manufacturer: Westcoat Specialty Coatings; 4007 Lockridge Street, San Diego, CA 92102. Telephone 800-250-4519. Fax 619-255-7187. Website: [www.westcoat.com](http://www.westcoat.com).

#### 2.02 MATERIALS

- A. As basis of design Westcoat Thin Film System (no substitutions will be accepted): 100% solids thin to medium build epoxy floor coating system typically installed at 17-28 mils.

#### 2.03 COMPONENTS

- A. Thin Film: 100% Solids Epoxy.
  1. Primer: EC-12 Epoxy Primer pigmented 250-300 square feet per gallon.
  2. Top Coat: EC-34 Epoxy Topcoat pigmented 100-200 square feet per gallon.

#### 2.04 ACCESSORIES

- A. Supplemental Materials:
  1. Patching materials shall be EC-72 Epoxy Patch Gel.
  2. Concrete repairs can be made with TC-23 Mortar Mix as needed.

3. Optional cove base shall be EC-76 Epoxy Cove Gel.
4. Optional aggregate shall be CA-30 Small Safe Grip, CA-31 Large Safe Grip, or other sand designed to meet the owners skid resistance requirements.

Optional Topcoats:

5. EC-50 Novolac may be used IN LIEU of EC-34 for extreme chemical or heat conditions.
6. SC-65G WB Gloss Polyurethane may be used OVER the EC-34 when a low odor, solvent free, mar and chemical/UV resistant gloss finish is required.
7. SC-65SG Pigmented WB Semi-Gloss Polyurethane may be used OVER the EC-34 when a low odor, solvent free, mar and chemical/UV resistant semi-gloss finish is required.
8. SC-65F WB Flat Polyurethane may be used OVER the EC-34, SC-65G Gloss, or SC-65SG Semi-Gloss when a low odor, solvent free, mar and chemical/UV resistant flat finish is required.
9. EC-95G Gloss Polyurethane may be used OVER the EC-34 when a chemical/UV resistant, solvent-based gloss finish is required.
10. EC-95F Flat Polyurethane may be used OVER the EC-34 or EC-95G when a chemical/UV resistant, solvent-based satin finish is required.
11. EC-101 Polyaspartic 100% Solids may be used OVER the EC-34 as a non-yellowing, high gloss, quick drying, high build, mar and chemical resistant finish with outstanding wear resistance.
12. EC-102 Polyaspartic may be used OVER the EC-34 when tire staining is a concern. Provides a quick drying, UV resistant, high gloss, high build, mar and chemical resistant finish.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verification of Conditions.
  1. Inspect all surfaces to receive epoxy flooring. 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.
  2. Conduct calcium chloride testing according to ASTM F1869.
  3. Before starting work, report in writing to the authority having jurisdiction any unsatisfactory conditions.

#### **3.02 SURFACE PREPARATION**

- A. Prepare surfaces using methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Shot blast or mechanically abrade the surface to achieve a surface profile equal to CSP of 2-3 as specified by ICRI.
- C. Clean Surfaces thoroughly prior to installation.
- D. Rout and clean moving cracks and joints: fill with manufacturer's recommended flexible epoxy filler material.
- E. Repair any non-moving surface deviations with manufacturer's recommended patching material.

#### **3.03 INSTALLATION**

- A. Install coatings in accordance with manufacturer's instructions.
- B. Mix multi-component materials in accordance with manufacturer's instructions.
- C. Use application equipment, tools, and techniques in accordance with manufacturer's instructions.
- D. Uniformly apply coatings at spread rates and in number of coats to achieve specified mil thickness recommended by the manufacturer.
  1. Install integral cove base where indicated on the contract drawings and according to manufacturer's instructions.
  2. Key in all drains, edges, and transition points according to manufacturer's instructions.
- E. Broadcast aggregates in accordance with the specified system and manufacturer's instructions.
- F. Adhere to all limitations, instructions, and cautions for epoxy coating as stated in the manufacturer's published literature.



### 3.04 FIELD QUALITY CONTROL

- A. Verify coatings and other materials are as specified.
- B. Verify coverages of the system as work progresses. Areas found not to meet the required thickness shall receive additional material until specified thickness is attained.
- C. Manufacturer's representative shall provide technical assistance and guidance for surface preparation and application of coating systems.

### 3.05 PROTECTION AND CLEAN-UP

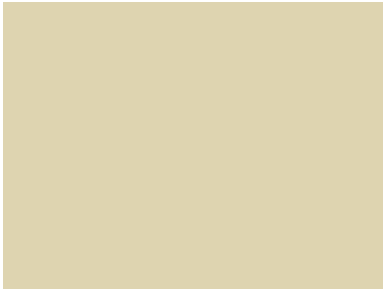
- A. Prohibit traffic on floor for 48 hours after installation. Avoid heavy abrasion and chemical exposure for 5 days. Allow 72 hours minimum for vehicular traffic.
- B. Protect finished surfaces of coating system from damage during construction.
- C. Touch-up, repair or replace damaged flooring system after substantial completion.
- D. Clean area and remove all debris upon completion of work. Dispose of empty containers properly according to current Local, State and Federal regulations.

### 3.06 MAINTENANCE

- A. Contractor shall provide to owner, maintenance and cleaning instructions for the floor system upon completion of work. Owner is required to clean and maintain the surfaces to maintain manufacturer's warranty.

## **END OF SECTION**

*This guide specification has been prepared by Westcoat Specialty Coating Systems to assist design professionals in developing a project specific specification. This guide is a template that must be reviewed and adapted by specifiers to comply with project requirements. This guide specification is not to be copied directly into a project specification manual without review.*



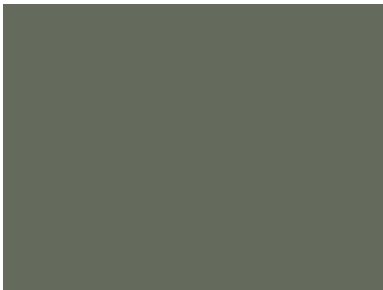
Travatan I 40



Tile Red I 34



Deep Tan I 27



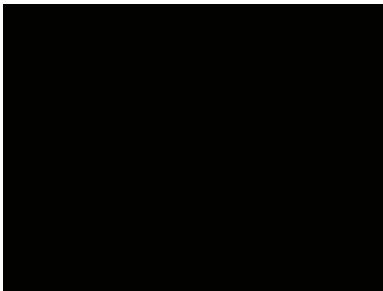
Pewter Gray I 12



Cape Cod Gray I 41



Concrete Gray I 52



Black I 56



Stone Gray I 42



Safety Red I 90



Safety Yellow I 91



Safety Blue I 92



Safety Green I 93

\* Also available in White | 00

\* Custom color matching also available in EC-11, EC-12, EC-34, EC-95 and EC-102 with a 20 gallon minimum and \$250.00 color matching fee.



**CAUTION** :

Color will vary between products and sheens. This chart is for reference only.  
Please request an actual color sample or apply sample on site before beginning any project.

