

**EPOXY COAT**  
DURABLE RESINS & HARDENERS

**Temper-Crete™ RTB**

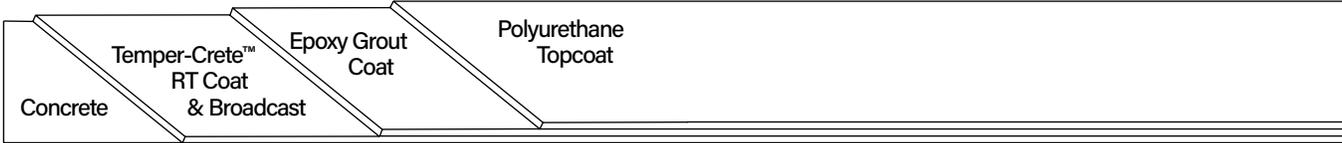
**Description**

Westcoat's Temper-Crete™ RTB System is a monolithic, flowable, urethane cement that can be installed with limited downtime. The Temper-Crete™ RTB System has excellent impact and chemical resistant qualities. The Temper-Crete™ RTB System features an optional integral colored urethane cement base, with silica sand broadcast and is sealed with Westcoat's EC-36 100% Solids Epoxy and EC-95G Gloss Polyurethane Topcoat, to provide a pigmented finish. It is designed for areas with heavy foot and moderate wheel traffic.

**Uses**

Temper-Crete™ RTB System is used to create a heavy duty, industrial, seamless floor in service areas, where a high-build, self-leveling and fast turnaround floor system is required. The Temper-Crete™ RTB System is ideal for breweries, wineries, distilleries, food processing, kitchens, warehouses, manufacturing areas and areas with high traffic.

**System Overview**



System Data				
<b>Coverages</b>	<b>Temper-Crete™ RT Coat</b> 43-46 ft <sup>2</sup> at 3/16 inch per batch 28-31 ft <sup>2</sup> at 1/4 inch per batch	<b>Broadcast Coat</b> 0.8-1.0 lbs per ft <sup>2</sup>	<b>Epoxy Grout Coat</b> 100-160 ft <sup>2</sup> per gal	<b>Polyurethane Topcoat</b> 275-350 ft <sup>2</sup> per gal
<b>Components</b>	<a href="#">EC-24 Temper-Crete™ Urethane</a>  <a href="#">TC-75 Temper-Crete™ RT Cement</a> <a href="#">EC-36 100% Solids Epoxy</a> <a href="#">CA-36 Epoxy Color Pack</a> <a href="#">EC-95G Gloss Polyurethane Topcoat</a>		<b>Shelf Life</b> Clear - 2 years Pigmented - 6 months 6 months 2 years 1 year 3 years	

**Advantages**

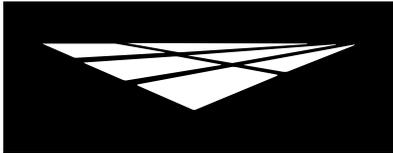
USDA/FDA/ADA Compliant • Thermal Shock Resistant • Low Odor • High Compressive Strength • High Build • Fast Turnaround • Chemical Resistant • Heat Resistant

**Inspection**

Temper-Crete™ RTB should only be applied directly to prepared concrete. Do not apply Temper-Crete™ RTB over existing coatings, tile, wood, etc. Concrete must be clean, dry and free of grease, paint, oil, dust, curing agents or any foreign material that will prevent proper adhesion. Any laitance or weak layers of concrete should be removed, prior to application. The concrete should be at least 3,500 PSI, porous and able to absorb water. A minimum of 14 days curing time is required on all concrete. Do not apply over damp or water-soaked concrete.

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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. Anchor grooves/keyways should be cut six inches from all free edges, walls, perimeter, drains and both sides of joints. Anchor keyways should be cut to a depth and width two times the thickness of the Temper-Crete™ RTB floor. Prepare concrete to a profile equal to CSP 3-5 as specified by ICRI. Methods may vary according to the condition and hardness of the concrete. When preparing the surface use caution when shot blasting, scarifying too aggressively or grinding too smooth. Do not feather edge the Temper-Crete™ RTB System. Always terminate into an anchor groove/keyway.

### Moisture

All concrete should be tested for moisture before applying a seamless coating. Temper-Crete RTB (at a minimum ¾", broadcast finish at ¼") is suitable for moisture vapor transmission up to 20 lbs/1000 square feet (ASTM F1869) or 99% relative humidity (RH) (ASTM F2170).

### Crack Treatment

Cracks, spawls and other imperfections in the substrate can be prefilled by mixing one kit of EC-24 Temper-Crete™ Urethane and one bag of TC-24 Temper-Crete™ Cement. Pre-mix EC-24 parts A and B individually. In a clean vessel, mix the entire contents of EC-24 parts A and B together for 30 seconds with a mechanical mixer. Slowly add one bag of TC-24 Cement and thoroughly mix the materials until a homogeneous mix is attained (~60 seconds), while being sure to scrape the sides of the vessel while mixing. Trowel the mixture into the voids and allow patching to dry for ~8-10 hours at 72F degrees before coating. This remedial approach to patch cracks is not guaranteed and it should be noted that when the substrate moves, it could likely crack the Temper-Crete™ RTB System.

### Joints

Moving expansion joints should be honored. Identify and tag joints before applying Temper-Crete™ RTB, using pins or concrete nails. Once the Temper-Crete™ RTB System has dried, cut through the system and fill with the appropriate joint filling material.

### Primer (Optional)

Priming the substrate is not normally required, but due to variances in concrete, surface profile and desired finish, priming may be needed to help stabilize the substrate and ensure a more uniform finish. All materials should be conditioned at 60-75F degrees for a minimum of 24 hours, before use. Pre-mix EC-24 Temper-Crete™ Urethane parts A and B individually. In a clean vessel, mix the entire contents of EC-24 part A and B together for 30 seconds with a mechanical mixer. Slowly add one bag of TC-74 Temper-Crete™ Primer & Topcoat Cement and thoroughly mix the materials until a homogeneous mix is attained (~60 seconds), while being sure to scrape the sides of the vessel while mixing. Apply the mixture onto the surface at a rate of ~120-150 square feet per mix using a ⅛ inch notched trowel or squeegee and back roll with a ¾ inch nap roller cover. Primer should be applied into anchor grooves/keyways, but brushed out to prevent from filling. Allow primer to dry for ~8-10 hours at 72F degrees, before proceeding with the Temper-Crete™ RT Coat.

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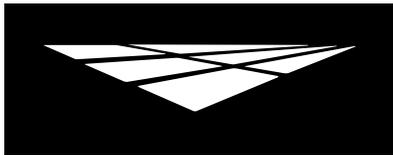


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### Temper-Crete™ RT Coat and Broadcast Coat

The Temper-Crete™ RT Coat can be applied from  $\frac{3}{16}$  inch to  $\frac{1}{4}$  inch thickness, on level or surfaces that have up to a 2% slope. All materials should be conditioned at 60-75F degrees for a minimum of 24 hours, before use. When applying Temper-Crete™ in temperatures below 60F degrees or when the material has not been properly conditioned, the overall flow, leveling and finish will be greatly affected. Pre-mix EC-24 Temper-Crete™ Urethane parts A and B individually. This mix will not fit in a five gallon mixing vessel. In a clean vessel, mix the entire contents of EC-24 part A and B together for 30 seconds with a mechanical mixer. Slowly add one bag of TC-75 Temper-Crete™ RT Cement and thoroughly mix the materials until a homogeneous mix is attained (~60 seconds), while being sure to scrape the sides of the vessel while mixing. Failure to properly mix materials may result in an inconsistent finish and can affect how the material flows and performs.

After mixing, immediately pour the material onto the surface and spread using a gauge rake. Repeat and be sure that the mixes are poured directly into the wet edge. It is recommended to have multiple mixing buckets in use, to reduce timing between mixes. After the material has been placed with the gauge rake, use an 18 inch pin or loop roller to roll the entire floor and then crosshatch or cross roll. Backrolling will help reduce entrapped air and will help remove pour lines. Backrolling must be completed immediately after placing material, to reduce the chance of roller marks (less than ~5 minutes at 72F degrees). Be sure to periodically change roller covers to ensure that curing material does not come in contact with uncured material. It is important to apply the material in an expeditious manner, always keeping a wet edge. Each mix will cover approximately 43-46 square feet at  $\frac{3}{16}$  inch and 28-31 square feet at  $\frac{1}{4}$  inch.

After placing and backrolling the Temper-Crete™ RT Coat as described above, allow the Temper-Crete™ RT Coat to sit for ~4-8 minutes at 72F degrees before proceeding with the broadcast. Broadcasting too early may result in entrapped air and may yield an irregular surface, while broadcasting too late may result in poor adhesion of the aggregate. Broadcast 30 mesh silica sand to refusal (~0.8 - 1.0 pounds per square foot) by broadcasting the material up into the air, allowing the aggregate to evenly disperse and fall into the wet Temper-Crete™ RT Coat. Careful and even placement of the silica sand will help prevent displacement and ensure more even coverage. Ensure that no bare spots are evident and do not pin roll material once broadcast. An additional broadcast may be needed if broadcast coat was uneven. Utilize EC-36 for any additional broadcast coats and refer to the mixing instructions in the "Epoxy Grout Coat" section below. Allow the Temper-Crete™ RT Coat and Broadcast to dry for ~8-10 hours at 72F degrees. Colder temperatures will prolong dry times. After the Temper-Crete™ RT Coat and Broadcast is dry, sweep up excess silica sand and vacuum the floor clean.

### Epoxy Grout Coat

Premix each component separately. For tinting with CA-36 Epoxy Color Pack, add one 32 fluid ounce unit of CA-36 per 3-gallon kit of EC-36 Epoxy. For color consistency, boxing is recommended when multiple batches of CA-36 are present. Mix the entire contents of CA-36 into the EC-36 Part A and mix thoroughly, before combining the Part B. Add the EC-36 Part B into the same container. 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. After mixing is completed, promptly remove material from container, as epoxy will begin to generate heat. Spread immediately onto the floor with a squeegee and back roll with an 18 inch,  $\frac{3}{8}$  inch high quality, non-shedding roller, at a rate of 100-160 square feet per gallon.

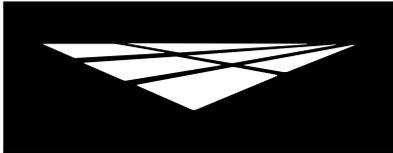
Allow the EC-36 to dry for a minimum of 8-10 hours (at 72F degrees) before applying the EC-95G Polyurethane Topcoat, but no later than 24 hours. If applying the EC-95 beyond the 24-hour recoat window, the surface will need to be abraded and solvent wiped, prior to application.

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### Polyurethane Topcoat

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-95G. 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. After mixing is completed, remove material from container and spread using a squeegee. Back roll with a 3/8" high quality, non-shedding, solvent resistant roller cover, at a rate of 275-350 square feet per gallon. Apply quickly and do not over roll, as product will begin to "tack-up" as the air begins to cure it.

### Dry Time

You may re-coat as soon as the surface is dry to the touch (~4 to 6 hours at 72F degrees), but no later than 24 hours. Light foot traffic may be permitted in 12 hours, normal traffic in 24 hours and vehicular and heavy traffic in 72 hours. All times based on an average temperature of 72F degrees and 50% humidity. Dry times may increase slightly when solvent is added. Colder temperatures will prolong dry times.

### Optional Materials

#### Accelerator

- CA-24 Temper-Crete™ Accelerator can be added to the EC-24 to reduce dry times for the Primer and Temper-Crete™ RT Coat applications. Refer to the CA-24 Product Specification Sheet for more information.

#### Topcoats

- Temper-Crete Topcoat: EC-28 Temper-Crete UV Topcoat Urethane & TC-78 Temper-Crete UV Topcoat Cement can be used over the silica sand broadcast, in lieu of EC-36 and EC-95, when a UV resistant, urethane cement topcoat is required.
- EC-34 Epoxy Topcoat may be used in lieu of EC-36, when a factory tinted, 100% solids, epoxy topcoat is desired.
- EC-40 Antimicrobial Epoxy may be applied over the Broadcast Coat, in lieu of the EC-36 and EC-95, when an antimicrobial finish is required.
- EC-50 Novolac may be applied over the Broadcast Coat, in lieu of the EC-36 and EC-95, when extreme chemical or heat conditions are a concern.
- Temper-Crete Topcoat: EC-28 Temper-Crete UV Topcoat Urethane & TC-78 Temper-Crete UV Topcoat Cement can be used over the silica sand broadcast, in lieu of EC-36 and EC-95, when UV resistant, urethane cement topcoat is required.

#### Skid Resistance

- CA-33 Aluminum Oxide can be used for skid resistance in heavy traffic areas.

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

### Clean Up

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

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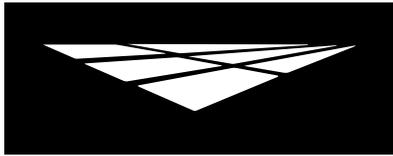


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### Maintenance

Interior Floors can be mopped & scrubbed daily using a neutral pH cleaner. Standard floor degreasers may be used as needed. Floors can be cleaned with a low PSI pressure washer as needed. Be sure to test any cleaning agents and methods in an inconspicuous area. For more information on floor care & maintenance, please refer to the General Maintenance sheet. The Temper-Crete™ RTB System should be inspected for wear every 2 to 4 years. The system should be maintained every 3 to 5 years depending upon traffic. If re-coating of the floor is required due to wear or abrasion, you will need to clean and degrease the surface, then lightly abrade, and reapply the topcoat. In most cases, you will need to clean the surface with a solvent, such as acetone and thin the new topcoat as well. A primer may be required. Contact Westcoat or your applicator for details.

### Health Precautions

Inhalation of vapor or mist can cause headache, nausea, irritation of nose, throat and lungs. Prolonged or repeated skin contact can cause slight skin irritation. All products have the potential of causing skin irritations or allergic reactions. Cements contain silicas; dust mask or respirator should be used when mixing, sanding or grinding. Be careful not to get on skin, clothes or in eyes. Glove and respirators are strongly recommended. Avoid breathing vapors. If splashed in the eye, flush with warm water and contact a physician if blurring persists.

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, by experienced applicators.
- Read Product Specification Sheets for every product you will be using before beginning the project.
- Be sure to do adequate surface preparation.
- Avoid application while ambient and substrate temperatures are climbing, as pinholes may appear.
- Be sure to measure and mix properly. Do not overmix material.
- For interior use only.
- May be slippery when wet.
- Do not thin the EC-24 Temper-Crete™ Urethane or adjust the mix ratio of EC-24 to cement.
- Do not apply to damp or wet surfaces.
- Be aware of the pot life of mixed material. Once materials are combined, immediately remove mix from mixing vessel.
- Do not apply in temperatures below 50°F or temperatures above 85°F. Hot or Cold weather will effect dry times.
- Do not apply material in direct sunlight. This can cause early surface dry, which can cause the surface to expand and crack.
- Material will discolor in time. Ultraviolet and some artificial lights may cause floors to discolor faster.
- Approval and verification of proposed colors, textures and slip resistance is recommended.
- Do not allow Westcoat products to freeze.
- Do not apply the Temper-Crete™ RTB System if the concrete substrate has ASR (Alkali Silica Reaction) or is susceptible to ASR.
- The Temper-Crete™ RTB System follows the overall lay of the existing substrate and the finished floor may reflect conditions of the existing substrate. These conditions include, but are not limited to, a "wavy" appearance or transitions between slabs.

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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.

**Test Data**

**Chemical Resistance - EC-95 Polyurethane**

Chemical Resistance	Clear & Pigmented
Muriatic Acid (31.5% HCL)	5
Sulfuric Acid (50% H2SO4)	5
Sulfuric Acid (93% H2SO4)	1
Nitric Acid (10% HNO3)	5
Sodium Hydroxide (50% NaOH)	5
Bleach (sodium hypochlorite)	5
Vinegar (3-5% acetic acid)	5
Transmission Fluid	5
Gasoline	5
Brake Fluid	5
409 Surface Cleaner	5
Pine Sol Solution	5
Blood & Body Fluids	5
Iodine Solution	5
Mustard	5/5s
Ketchup	5/5
Red Wine	5/5
Skydrol	5
Acetone	5
Methyl Ethyl Ketone (MEK)	5
Xylene	5
Ethanol	5
Methanol	5

**Technical Data**

Dry Times (at 72F Degrees)		Result
Dry to Touch		8-10 hours
Light Foot Traffic		12 hours
Normal Traffic		24 hours
Vehicular and Heavy Traffic		72 hours
Full Service		3-5 days
Physical Property	Test Method	Result
Tensile Strength	ASTM C-307	3,100 psi
Tensile Modulus	ASTM D638	300,000 psi
Compressive Strength	ASTM C-579	11,200 psi
Hardness Shore D	ASTM D2240	84
Flexural Strength	ASTM C580	6,100 psi
Abrasion Resistance	ASTM D4060	34 mg. loss
Adhesion to Concrete	ASTM D4541	Concrete Fails
Impact Resistance	ASTM D-2794	>160 in/lbs
Flammability	ASTM E-648	Class 1
Water Absorption	ASTM C-413	<0.1%
Service Temperature	-	-40°F min - 250°F Max
Resistance to Fungi Growth	ASTM G21	Rated 0 (no growth)
Resistance to Mold Growth	ASTM D3273	Rated 10 (highest resistance)

**Key:**

- 5 = Best (no effect)
- 4 = Softens (recovers)
- 3 = Softens (no recovery)
- 2 = Blistered (no recovery)
- 1 = Worst Destroyed
- s = With Stain
- \* Contact time > 5 hrs = 1

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