

westcoat[®]
SPECIALTY COATING SYSTEMS

**SYSTEM
SPECIFICATION**

EC

EPOXY COAT
DURABLE RESINS & HARDENERS

Temper-Crete™ RT

Description

Westcoat's Temper-Crete™ RT System is a monolithic, flowable, urethane cement that can be installed with limited downtime. The Temper-Crete™ RT System has excellent impact, chemical and thermal shock resistant qualities. The Temper-Crete™ RT System features an integral color with a matte finish and is designed for areas with heavy foot and moderate wheel traffic.

Uses

Temper-Crete™ RT 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™ RT System is ideal for commercial kitchens, restaurants, warehouses, food and beverage manufacturing, chemical processing plants, food processing plants and pharmaceutical facilities.

System Overview



System Data

Coverages **Temper-Crete™ RT Coat**
43-46 ft² at 3/16 inch per batch
28-31 ft² at 1/4 inch per batch

Components [EC-24 Temper-Crete™ Urethane](#)
[TC-75 Temper-Crete™ RT Cement](#)

Shelf Life
Clear - 2 years
Pigmented - 6 months
6 months

Advantages

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

Inspection

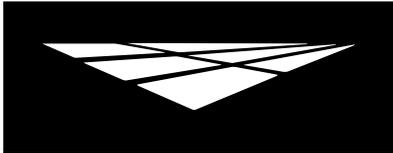
Temper-Crete™ RT should only be applied directly to prepared concrete. Do not apply Temper-Crete™ RT over existing coatings, tile, wood, etc. Concrete must be clean, dry and free of grease, paint, oil, dust, curing agents or any foreign material that will prevent proper adhesion. Any laitance or weak 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™ RT 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™ RT System. Always terminate into an anchor groove/keyway.

Moisture

All concrete should be tested for moisture before applying a seamless coating. Temper-Crete RT (at a minimum ¾") 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™ RT System.

Joints

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

Primer (Optional)

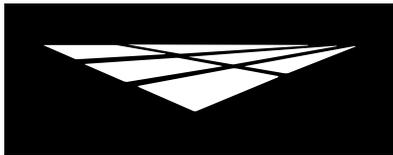
Priming the substrate is not normally required, but due to variances in concrete, surface profile and desired finish, priming may be needed to help stabilize the substrate and ensure a more uniform finish. All materials should be conditioned at 60-75F degrees for a minimum of 24 hours, before use. Pre-mix 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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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.

This concludes the Temper-Crete™ RT Coat. For increased slip-resistance, while maintaining a urethane cement finish or for additional finish options, please refer to the Temper-Crete™ RTB Broadcast System Specification.

Dry Time

Light foot traffic may be permitted after 8 hours. Heavy traffic and exposure to moisture and chemicals may be permitted after 72 hours. All times based on an average temperature of 72F degrees and 50% humidity. Colder temperatures will prolong dry times.

Optional Materials

Cement

- TC-74 Temper-Crete™ Primer & Topcoat Cement can be used for the Primer application, when combined with EC-24 Temper-Crete™ Resin.

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. Up to 1 fluid ounce is recommended per kit of EC-24. Up to 1 ounce can be added to the Primer Coat. $\frac{1}{2}$ ounce can be added to the Temper-Crete™ RT Coat. If temperature is below 50F degrees, up to 1 ounce may be added to the Temper-Crete™ RT Coat. CA-24 will reduce dry times, but will also reduce the working time.

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

Clean Up

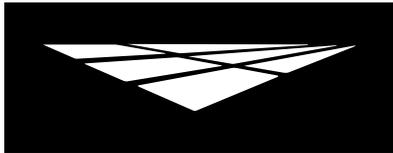
Uncured material can be removed with an environmentally-safe solvent. If cured, material can only be removed mechanically.

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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™ SL System should be inspected for wear every 2 to 4 years. The system should be maintained every 3 to 5 years depending upon traffic. Contact the original installer of this Westcoat project for complete maintenance instructions.

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

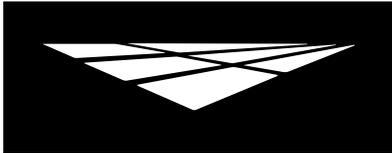
- This system is designed for professional use only, by experienced applicators.
- Read Product Specification Sheets for every product you will be using before beginning the project.
- Be sure to do adequate surface preparation.
- Avoid application while ambient and substrate temperatures are climbing, 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™ RT System if the concrete substrate has ASR (Alkali Silica Reaction) or is susceptible to ASR.
- The Temper-Crete™ RT 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

Chemical Resistance	Result
Muriatic Acid (31.5% HCL)	4
Sulfuric Acid (50% H2SO4)	4
Nitric Acid (10% HNO3)	4
Sodium Hydroxide (50% NaOH)	4
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
Ketchup	5
Red Wine	5
Acetone	5
Methyl Ethyl Ketone (MEK)	5
Xylene	5
Ethanol	5
Methanol	5

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

Technical Data

Dry Times (at 72F Degrees)	Result	
Tack Free over concrete	2.5 hr.	
Light Foot Traffic over concrete	8 hours	
Normal Traffic	24 hours	
Vehicular and Heavy Traffic	72 hours	
Full Service	3-5 days	
Pot Life (Gel Time) 150gm	5-10 min.	
Physical Property	Test Method	Result
Tensile Strength	ASTM C-307	1,000 psi
Compressive Strength	ASTM C-579	5,901 psi
Hardness Shore D	ASTM D2240	78
Flexural Strength	ASTM C580	2,100 psi
Abrasion Resistance	ASTM D4060	.07 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
Softening Point	-	266°F
Coefficient of Thermal Expansion	-	0.9x10 in./in./°F
Resistance to Fungi Growth	ASTM G21	Rated 0 (no growth)
Resistance to Mold Growth	ASTM D3273	Rated 10 (highest resistance)
Flame Spread	ASTM E-84	Class B
Critical Radiant Flux	ASTM E648	Class I
Flammability Rate of Burning	ASTM D635	CC1 in accordance with IBC Section 2606.4; specimens did not continue to flame for an extended period of time after the flame application

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