westcoat®
SPECIALTY COATING SYSTEMS

SYSTEM SPECIFICATION

EC EPOXY COAT
DURABLE RESINS & HARDENERS

Tidalstone™ Flooring System High Build

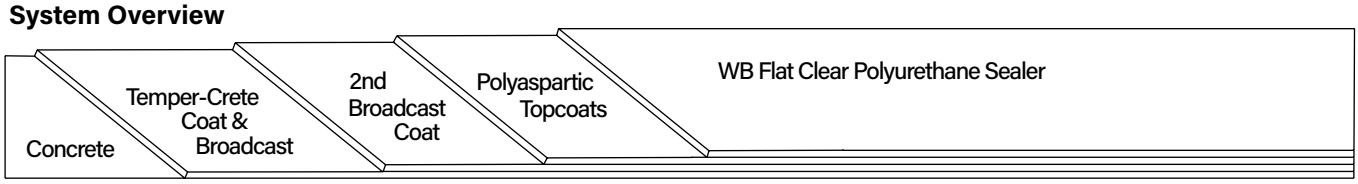
Description

Westcoat's Tidalstone™ High Build Flooring System is a multi-layered, resinous flooring system that features Westcoat's Temper-Crete™ urethane cement base, decorative TC-62 Tidalstone™ aggregate blend, EC-102 Polyaspartic and SC-65F WB Flat Clear Polyurethane Sealer. This unique system produces a finish similar to the look of polished concrete or terrazzo flooring, with a natural, flat finish, while providing all the benefits and attributes of a resinous flooring system.

Uses

Tidalstone™ Flooring System is a decorative, durable and chemical resistant option that is an ideal choice for designers and architects and is intended for use in showrooms, offices, recreation rooms, laboratories and clean rooms.

System Overview



System Data

Coverages	**Temper-Crete™ Coat** 40-45 ft² at ⅛ inch per batch 20-22.5 ft² at ¼ inch per batch **Tidalstone Aggregate Blend** 7-8 ft² per pound	**Polyaspartic Topcoat** 175-225 ft²per gallon **Tidalstone Aggregate Blend** 7-8 ft² per pound	**Polyaspartic Topcoats** 1st: 120-140 ft² per gallon 2nd: 250-300 ft² per gallon	**WB Flat Polyurethane Sealer** 680-720 ft² per gallon

Components	**Shelf Life**
EC-24 Temper-Crete™ Urethane	2 years
TC-24 Temper-Crete™ Cement	6 months
EC-102 Polyaspartic Topcoat	2 years
SC-65F Polyurethane Sealer	1 year
TC-62 Tidalstone Aggregate Blend	N/A

Advantages

USDA/FDA/ADA Compliant ▪ Thermal Shock Resistant ▪ Chemical Resistant ▪ Seamless ▪ High Build ▪ High Compressive Strength ▪ Can be Installed Solvent Free ▪ Self-Leveling ▪ Moisture Tolerant

Inspection

Tidalstone Flooring System should only be applied directly to prepared concrete. Do not apply Tidalstone Flooring System 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.

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 Tidalstone Flooring System. 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. When preparing the surface use caution when shot blasting, scarifying too aggressively or grinding too smooth. Do not feather edge the Tidalstone Flooring System. Always terminate into an anchor groove/keyway.

Moisture
All concrete should be tested for moisture before applying a seamless coating. If moisture emissions exceed 15 lbs/1000 square feet (ASTM F1869) or if the relative humidity (RH) exceeds 95% (ASTM F2170), contact the manufacturer before application.

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 Tidalstone Flooring System.

Joints
Moving expansion joints should be honored. Identify and tag joints before applying Temper-Crete™ SLB, using pins or concrete nails. Once the Temper-Crete™ SLB 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 ⅜ 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™ Coat.

Temper-Crete™ Coat and Tidalstone Aggregate Blend Broadcast
The Temper-Crete™ Coat can be applied from ⅛ inch to ¼ 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. 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-24 Temper-Crete™ 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 roller to roll the entire floor and then crosshatch or cross roll. Pin rolling will help reduce entrapped air and will help remove pour lines. Pin rolling must be completed immediately after placing material, to reduce the chance of roller marks (~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 40-45 square feet at ⅛ inch and 20-22.5 square feet at ¼ inch. After placing and pin rolling the Temper-Crete™ Coat as described above, allow the Temper-Crete™ Coat to sit for ~12-15 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 pre-mixed TC-62 Tidalstone™ aggregate blends to refusal at approximately 7-8 square feet per pound by broadcasting the material up into the air and allowing the aggregate to evenly disperse and fall into the wet Temper-Crete Coat. Careful and even placement of the TC-62 will help prevent displacement and ensure more even coverage. Ensure that no bare spots are evident and do not pin roll material once broadcast. Allow the Temper-Crete Coat and Tidalstone Aggregate Broadcast Coat to dry for approximately 24 hours at 72F degrees. Colder temperatures will prolong dry times. After the Temper-Crete Coat and Tidalstone Aggregate Broadcast is dry, scrape and sweep up excess TC-62 Tidalstone Aggregate Blends and vacuum the floor clean.

2nd Tidalstone Aggregate Blend Broadcast
Mix 1 part A and 1 part B (by volume) of EC-102 Polyaspartic. Depending on the desired color, pigmented EC-102 can be used in lieu of clear, to change the overall appearance of the floor. Please refer to the TC-62 Tidalstone Color Chart for color references. For color consistency, box all part A's. Apply at the rate of 175-225 square feet per gallon. Broadcast pre-mixed TC-62 Tidalstone aggregate blends into the wet EC-102 to refusal (until no shiny spots are evident), at approximately 7-8 square feet per pound. After the EC-102 has cured, collect all loose TC-62 and scrape, and sand surface. Sanding the surface with a finer grit may provide a smoother texture, when desired. Ensure that the surface is dry enough to sand, as sanding improperly may damage the surface. Vacuum all loose TC-62 and ensure that the floor is clean and free of any unbonded TC-62, prior to proceeding with the Polyaspartic Topcoat.

Polyaspartic Topcoat
Combine 1 part A, with 1 part B of EC-102 and mix thoroughly with a low speed drill motor for 2-3 minutes. Pour immediately onto the floor and spread the material using a squeegee or trowel. Use a ⅜ inch nap, non-shedding roller cover and backroll the material in both directions. Coverage should be around 120-140 square feet per gallon. After the topcoat has dried, you may sand or scrape rough spots and apply a second coat of EC-102 at approximately 250-300 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.

WB Flat Polyurethane Sealer
Pre-mix each component of SC-65F WB Flat Polyurethane Sealer separately. In a clean bucket, mix 3 parts A with 1 part B (by volume) of SC-65F Water-Based Flat Polyurethane Sealer. Mix thoroughly with a low speed (200-300 rpm) drill motor for 2-3 minutes. Make sure to scrape the sides and bottom of the container during mixing. Immediately after mixing, apply the SC-65F onto the substrate at a rate of 680-720 square feet per gallon. SC-65F can be sprayed or rolled. For best results, spray SC-65F neat, with an airless sprayer. SC-65F may be applied with a squeegee or sprayed with a pump sprayer (note thinning may be required to spray properly out of a pump sprayer) and back rolled with a ¼ to ⅜ inch, high-quality, non-shedding roller cover, being sure to maintain a wet edge. For best results, two coats are recommended to ensure an even finish.

Dry Time
You may re-coat as soon as the surface is dry to the touch or in about 4-8 hours. Light foot traffic may be permitted in 12 hours, normal traffic in 24 hours and vehicle traffic in 72 hours. All times are based on average temperature of 72F degrees and 50% humidity. Avoid heavy abrasion and chemical exposure for 5 days.

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™ Coat applications. Refer to the CA-24 Product Specification Sheet for more information.

Broadcast Coat - 100% Solids Option

- When a 100% solids system is required, EC-34, EC-36 or EC-101 can be used in lieu of EC-102 for the broadcast coat.

Topcoat - 100% Solids Option

- When a 100% solids system is required, EC-32, EC-36 or EC-101 can be used in lieu of EC-102 for the Topcoat.

Topcoat Options

- EC-95G or EC-95F can be used in lieu of SC-65F, when a solvent-based polyurethane topcoat is required.
- SC-65G or SC-65SG can be used in lieu of SC-65F when a Gloss or Semi-Gloss WB Polyurethane is required.

Skid Resistance

- CA-30 Small Safe Grip or CA-31 Large Safe Grip can be added to the EC-102 to produce a skid-resistant surface.
- 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.

Maintenance

IInterior 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 Tidalstone Flooring 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. 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.

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 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™ SLB System if the concrete substrate has ASR (Alkali Silica Reaction) or is susceptible to ASR.
- The Temper-Crete™ SLB 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.

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.

Tidalstone™ Flooring System High Build

Technical Data

Chemical Resistance
SC-65F Water-Based Flat Polyurethane Sealer

Chemical Resistance

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
Isopropyl Alcohol (99%)	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	5/5s
Ketchup	5/5
Red Wine	5/5
Acetone	5
Methyl Ethyl Ketone (MEK)	5
Xylene	5
Skydrol	5
Ethanol	5
Methanol	5

Key:
5 = Best (no effect)
4 = Softens (recovers)
3 = Softens (no recovery)
2 = Blistered (no recovery)
1 = Worst (destroyed)
s = Stains but resists degradation

Testing done per ASTM D1308
All Single Numbers = 2 hr Contact time
All Multiple Numbers Separated by a Slash = 2 hr contact time / 24 hr contact time

Technical Data

Tack Free over concrete @72°F	4 hr.
Foot Traffic over concrete @72°F	12-16 hr.
Wheel Traffic	72 hr.
Adhesion to Concrete (ASTM D4541)	concrete fails
Compressive Strength (ASTM C-579)	6,100 psi
Tensile Strength (ASTM C-307)	1000 psi
Flexural Strength (ASTM C-580)	2,100 psi
Water Absorption (ASTM C-413)	<0.1%
Resistance to Fungi Growth (ASTM G21)	Rated 0 (no growth)
Resistance to Mold Growth (ASTM D3273)	Rated 10 (highest resistance)

* Values based on standard mix, will vary according to final use.