

concrete DECOR®

Vol. 20 No. 2
February/March 2020
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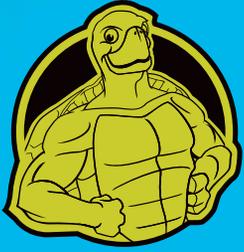
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Publisher's Letter



Dear Readers,

At the World of Concrete, *Concrete Decor* kicked off the New Year by hosting the fourth annual Decorative Concrete LIVE! It was our most successful not just because of what we accomplished, but what happened in the space — community! Artisans and company reps were all working together! It reminded me of what's been one of the strongest attractants to our industry in years past.

After several months of in-depth planning, *Concrete Decor* will unveil its newly designed website March 30. For those who reference our online resources regularly you're going to find it easier to navigate our immense library of content. For those new to the website, be prepared to learn how the many facets of this industry fit together in ways you haven't experienced. Our annual Product and Training guides will also remarkably change as new search tools will help you find what you're looking for much faster.

I might sound like a broken record, but I still believe that trades are taught through on-the-job training. It's how I learned and those skills are with me for life. Our industry is changing in ways I don't believe are all that good. When investors buy up manufacturers or distributors who've gained enough market share to justify the acquisition, a shift in expectations occurs throughout the supply chain and, as a result, a change in how products are sold to the end-user.

At *Concrete Decor* we look at decorative concrete as a unique trade. It draws interest from other trades, but that doesn't make us a flooring or coatings industry adaptation. We are decorative concrete and unless the world recognizes us as a trade, the trade will be nothing more than a bunch of business opportunities. Trade comes first! It's how this industry evolved. It's what got so many different types of distributors excited about serving this industry. But as fast as it's grown, it can dissipate even quicker from a lack of attention and investment back into this industry.

An industry's success is often seen in the pages of its trade magazine(s). Fewer companies invest in *Concrete Decor* today because they claim that analytics aren't found in a printed ad. However, unless a magazine covers an industry the way it should, all you're left with is a bunch of product manufacturers and dealers selling off reasons why their product is better than another.

We can still make this industry work if we keep things in perspective. Decorative concrete isn't interested in being just another industry. Knowing the people I know, our industry deserves and demands better.

Please subscribe to *Concrete Decor's* online newsletter and read our blog online at www.concretedecor.net/digital/blog/. Let's turn the problems of a strong labor pool over to some other industry while we turn up the volume on what distinguishes us from the rest.

Sincerely,

Bent Mikkelsen
Publisher

On the cover: Danny Carrillo of Graco sprays as artisan Emil Gera trowels a wall in preparation of Decorative Concrete LIVE!
Photo by Glen Klassen

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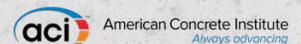
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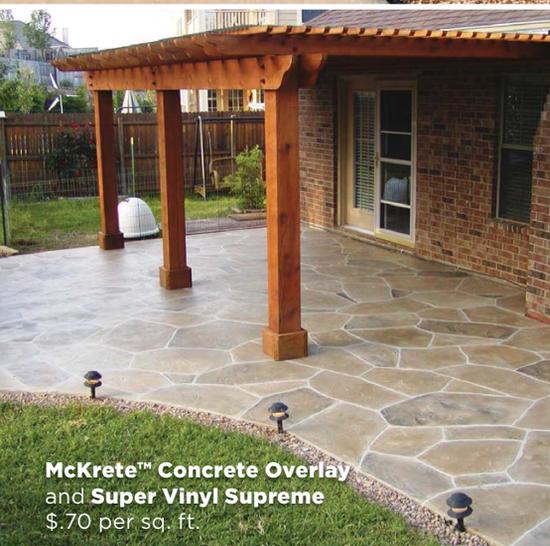
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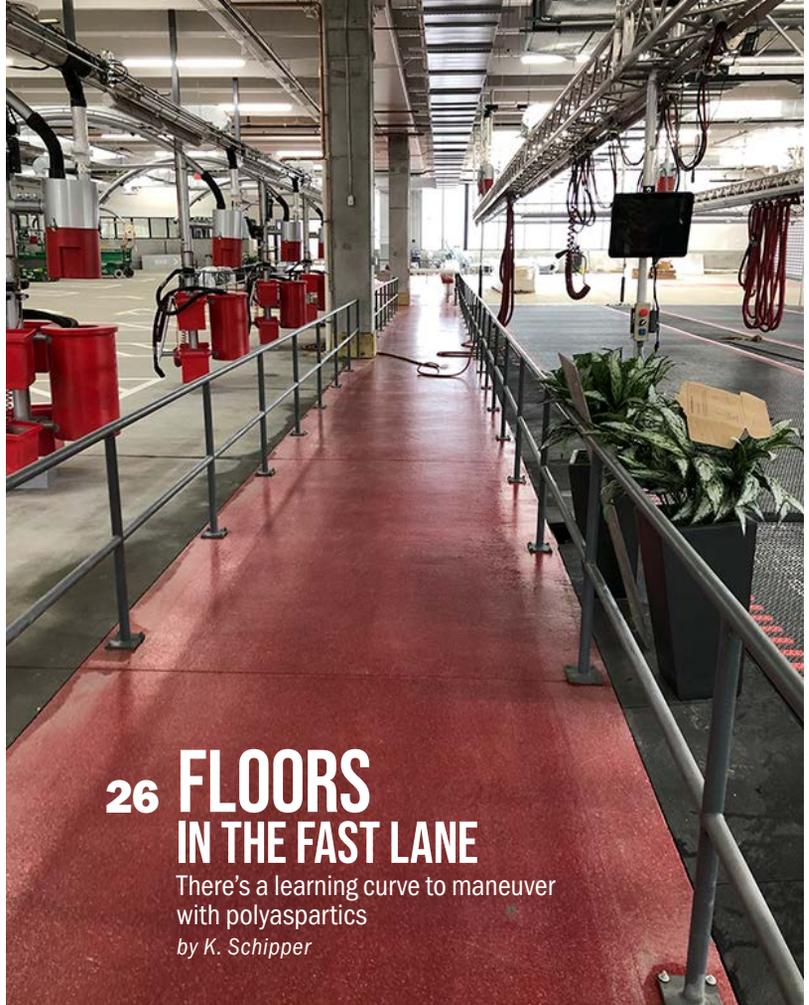
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Travis Larsen, CRFP, is the vice president of construction and facilities for Café Zupas, a national restaurant company. With more than 20 years of experience in the commercial restaurant construction and facilities industry, he has a broad knowledge of construction and flooring materials. Travis enjoys teaching and sharing his knowledge with others. You can reach him at tlarsen@cafezupas.com. See Travis' article on page 34.



Tyler Stephens is president of Stephens Concrete Sealing, a surface restoration, cleaning and sealing company in Indianapolis, Indiana. The family-owned company, founded in 2009, services both homeowners and businesses. Tyler can be reached at (317) 264-9781 or tyler@stephensconcretesealing.com. See Tyler's article on page 36.



Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. and a member of the Decorative Concrete Hall of Fame. He has led seminars and product demonstrations throughout North America. Reach him at questions@concretedecor.net. See Chris' column, "Concrete Questions," on page 38.

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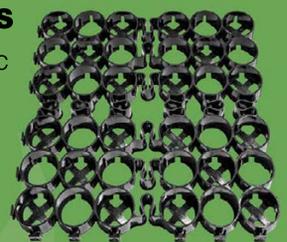
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It's ideal for filling imperfections, smoothing rough surfaces, repairing honeycombs and dressing bug holes or other small surface defects in newly placed or existing concrete. Its creamy consistency allows it to be used as a concrete wash or parging material. Highly versatile with excellent bond and freeze-thaw resistance, Meadow-Patch Smooth-Grade may be used in interior and exterior locations on below-, above- and on-grade applications.

The product is highly durable, having 6,500 psi compressive strength, and is also designed to be used under flooring systems.

 www.wrmeadows.com



Training series focuses on specialty wall finishes

Specialty wall finishes are taking the decorative concrete industry by storm, as evidenced by what World of Concrete attendees witnessed at the 2020 Decorative Concrete LIVE!

In response to this heightened interest, SureCrete has launched a new training series for concrete artisans and craftsmen to learn techniques of how to best prep, apply, enhance and protect interior wall systems with the products found in its new Artisan Series collection. The two-day classes focus on the basics on day one and advanced finish techniques the second day.

The training sessions kicked off in February and are currently scheduled to be held at various locations nationwide through May.

 www.surecretedesign.com

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Renew-Crete launches new website

Renew-Crete Systems, an industry leader specializing in top-quality decorative concrete products at affordable prices, has launched a dynamic new website at www.renewcrete.com.

Completely redesigned by Concrete Decor Web Services, the enhanced site includes an Inspirational Gallery of a variety of featured projects, a virtual shopping cart so visitors can purchase product directly from Renew-Crete, color charts, downloadable brochures and links to distributors across the country and in Singapore. The site also features an About Us page, testimonials, individual product descriptions and training information.

Headquartered in Rockledge, Florida, Renew-Crete Systems has been manufacturing and distributing an array of decorative concrete products for stamped overlays, textured surfaces, acid stains, resurfacing, spray coats, patch repair, sealing, vertical

applications and countertops. For more than 20 years, its one-component bag mixes have been popular among professionals and novices alike.

Concrete Decor Web Services, a web design entity affiliated with *Concrete Decor* magazine, offers turn-key services to companies seeking ways to be more user-friendly, adaptable and efficient to web users regardless of the viewing platform. It's also equipped to handle product sales by linking the company's shopping cart to *Concrete Decor's* Marketplace.

Concrete Decor Web Services range from redesigning company logos and designing and launching websites to maintaining them afterwards. Ongoing services include adding/updating gallery photos, continual SEO work, layout and content updates. 

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Concrete Decor Puts on a Really Big Show for 2020 Decorative Concrete LIVE!

THE jury's in for the most recent rendition of Decorative Concrete LIVE! presented Feb. 4-7 during World of Concrete 2020 in Las Vegas.

"We put on one hell of a show this year," says Emil Gera of Gera Concrete out of Pennsylvania who served as the "official" unofficial general manager for Decorative Concrete LIVE! and was again aided by his buddy, Matt Sampson. "Projects got finished, we pulled the fountain off at the 11th hour and everything came together. I'm thrilled with the amount of work that got done. Out of all the projects I've been involved with, this ranks up there in the top five."

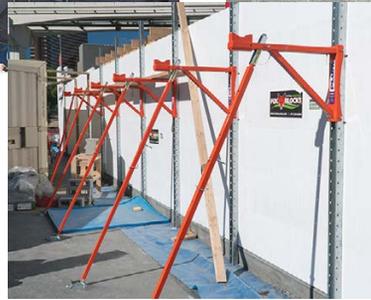
Chris Becker, the Fenix Group vice president of marketing and brand management who headed up the SureCrete crew, echoed Gera's sentiment. "The many comments I heard resonated that this was the best managed (Decorative Concrete LIVE!) from beginning to end that resulted in a much more complete presentation."



In the past, unforeseen turns in the weather or projects that were more ambitious than what people could execute in the given time resulted in too many loose ends. This year, Becker says, show participants demonstrated their skills at a healthy pace and completed most projects while onlookers watched. "People enjoyed seeing the process as

well as the conclusion," he says.

"We couldn't have asked for a better outcome," Gera says. "In my wildest dreams, I couldn't have picked a better team than the one we had. We worked together well. We busted our butts but we had a good time doing it. No one's ego got in the way."



Photos courtesy of Concrete Decor unless otherwise noted

Setting the stage

This year's theme was Colorful Cityscapes. What was delivered was a loosely interpreted "contemporary street scape," Becker says, who along with Gera and Bent Mikkelsen, the show's producer, was heavily involved with the show's design and setup.

"It's cool to have a theme but a lot of folks like to put their own signature on what they do," Becker says. "It would have taken the joy out of it if we had to stick to a predetermined blueprint. We had a nice cross of things that were very clever and very artistic."

After all, he continues, "The real purpose of Decorative Concrete LIVE! is to inspire others and show creativity. To make people say 'wow,' this is something I can get into. They don't want something abstract. They're looking for ideas that they can incorporate into their business and utilize on a regular basis."

Insulating concrete forms along with SpiderLath, a fiberglass lath system, were once again used to build the walls that would be covered with decorative concrete of many ilks. As part of this year's preplanning, Gera says, Glen Klassen of Fox Blocks built a mockup of the site with miniature ICFs and videotaped the process. "He went above and beyond what was expected," Gera says, and his expertise on securing ICFs to withstand the 60 mph winds that kicked up one day was nothing short of impressive. "Nothing moved."

Before any of the forms were set or concrete was placed, Gera says, a moisture barrier consisting of Viper II from ISI Building Products was put down to protect the parking lot. Fritz-Pak additives were used to dose the delivered ready-mix concrete to improve workability and better control set times. A Putzmeister truck's boom pump rose up over the area where Decorative Concrete LIVE! would come to life, helping people understand how ICF walls are built. The stage was set.

It was time for the real work to begin.



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We built this city

What was anticipated to be the entrance to the exhibit — a pair of rock-like formations holding up a ball that alluded to the World of Concrete — morphed into something you’d find in a canyon sooner than a downtown plaza.

Under the direction of Josh Russell of Beyond Vertical Concrete, who labored on the project for days, a combination of products from Kingdom Products, Quikrete, SureCrete, Poraver and Stone Edge Surfaces was used to build the vertical elements. Kingdom Products’ Olde World Stain was used to color. Universal Foam Products provided the large blocks of expanded polystyrene used to form the rocks and orb, as well as for the rockwork in the exhibit’s overflowing pizza parlor.

Glass from American Specialty Glass and aggregate were broadcast around the structure and Rachel Knigge Bruce of Floormaps used Ameripolish dyes to color parts of the surrounding area to resemble sand and water. The bulk of the area was polished with a Rhino RL500 from New Grind operated by Jeremy Wilkerson of DreamKrete.





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Jake Brady of Jake Brady Concrete by Design used Kingdom Products materials mixed with Poraver Expanded Glass, globular glass grains made from post-consumer recycled glass, to build a massive fountain with a fire feature for the plaza. Poraver's addition to the mix reduced the structures' overall weight and improved the mixture's workability. Twenty pounds of Poraver can handily replace 100 pounds of sand.

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Photo courtesy of Concrete Marketing Crew



The exterior wall of the area dubbed the pizza parlor featured Dominick Cardone of Diversified Decorative Finishes applying Skraffino, a high-performance architectural coating from Duraamen that can be used on both walls and floors.

The parlor's exterior wall featured a stencil from Floormaps, as did another outside the Marketplace Store. The vines stencil was applied by Rebecca and Gaetano Fuscardo of Fuscardo Concrete. Rebecca Gaetano also carved a figurehead on the store's column nearby and her son, who seemed to be everywhere, pitched in wherever needed.

The interior of the parlor featured a pizza oven door and stone walls made and colored with products from Stone Edge Surfaces including its MicroTop, Stamp, Spray and Wall mixes, Liquid Colors and Mountain Dry Stack Stamp. Gera did much of the carving aided by Gregg Hensley of Stone Edge. The scratch coat was lightweight stucco from Quikrete which was applied by Danny Carrillo of Graco using a Graco S340 stucco sprayer fed with a CM20 continuous mixer.

Other mixers that helped get the jobs done were the Imer 120 vertical mixer and a workhorse from Multiquip that easily handles bag mixes. To help keep down the airborne dust and the entire area tidy, a vacuum from Dustcontrol was constantly in use.



Next door, SureCrete set up shop with an extension of the pizza parlor that featured a rock formation, water features and three concrete tables, all made on-site. Much of the work was done by Becker and his crew from SureCrete and the Cement Sisters, namely Tracy and Krissy Musetti and Danielle Johanson, and Danielle's husband, Joshua.

SureCrete's MicroTek, a microtopping that can be used on floors and walls, was applied in multiple lifts in coordination with the custom-made tree-line stencil colored with SureCrete Eco-Stain. (<https://youtu.be/xVbhyQ8zAb4>) The "river" table, a Butterfield log mold table, columns and a "warp" table (see Final Pour on page 40) were made with XS-Precast countertop mix.

The floor was made with a 16-inch Boardwalk stamp from Proline that was colored with three shades of Eco-Stain and sealed.



Heralded as a photo op for selfie enthusiasts, the 3-D drawings on the floor and walls and the metallic floors in the Marketplace store adjacent to SureCrete's space were created with SurfKoat products by Rick Lobdell of Concrete Mystique and his helper, Tim Maloney of Maloney's Decorative, and others. Materials included high-performance urethane coatings, color dyes, the polyaspartic PolyKoat GL80 with metallics and Deco Guard sealer with Acrylpack.

Concrete Decor
wants to express its
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A concrete countertop at one end of the store was cast in a Z-Countertop form from Concrete Countertop Solutions with Kingdom Product's Imperial Countertop mix in white and seeded with American Specialty Glass. The form is specially designed to allow contractors to cast countertops in place. Other forms this year include reusable varieties from Elite PlastiForm that form curves and radius edges in the plaza area.



Thanks for sharing!

A special shout-out to Danny and Mady Barrera of the Concrete Marketing Crew out of Florida for their help with coverage of this year's Decorative Concrete LIVE! on social media.

📌 <https://youtu.be/X7ZTbGXJbBg>





Also adorning the plaza were circles etched with an Engrave-A-Crete Mongoose. To make them stand out, they were colored with Nox-Crete Acryl-Pen silane-based stains and sealed with Sparkl-Seal, a high-gloss decorative acrylic sealer. Marty O'Mara of Nox-Crete also demonstrated the company's Deco Peel, an innovative coating remover that involves a cellulose fabric blanket and a stripper that are rolled out and pulled up to achieve bare concrete.

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The A list

Many thanks to the following men and women of Decorative Concrete LIVE! 2020 who together made this event the best one we've ever experienced:

- | | | |
|---|---|---|
| Danny & Mady Barrera (Florida) | Rebecca & Gaetano Fuscardo (West Virginia) | Tim Maloney (Florida) |
| Chris Becker (Minnesota) | Emil Gera (Pennsylvania) | Patrick Meffert (Texas) |
| Jon Bell (Indiana) | Dawn Gibson (Missouri) | Matthew Mikkelsen (Oregon) |
| Jane Bennett (Alaska) | Brandt Heitzman (Florida) | Kip Morris (Tennessee) |
| Jake & Susannah Brady (Florida) | Gregg Hensley (South Carolina) | Tracy & Krissy Musetti (California) |
| Ralph & Sonya Brown (Pennsylvania) | Shane Hopkins (Minnesota) | Marty O'Mara (Nebraska) |
| Rachel Knigge Bruce (Arkansas) | Trey Hudson (Virginia) | Victor Pachade (New Jersey) |
| Dominick Cardone (New York) | Josh Johanson & Danielle Johanson (Utah) | Joshua & Shanna Russell (Michigan) |
| Danny Carrillo (New Mexico) | Glen Klassen (Manitoba) | Matthew Sampson (Florida) |
| Andrea & Anavii Chavira (Arizona) | Randall Klassen (Manitoba) | Steve Seipelt (Ohio) |
| Cory & Allan Christenson (Utah) | Rick Lobdell (Tennessee) | Ben Wiese (Idaho) |
| Brandon Davidsavor (Wisconsin) | Cindee Lundin (Arizona) | Jeremy & Danielle Wilkerson (Virginia) |

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A treasured ending

The adjoining concrete expanse leading up to Cindee Lundin's public work of art featured Top-Cast, a surface retarder line from Dayton Superior that can produce a range of etched finishes from full stone exposure to sand. It's touted for its ease of use, as it doesn't require plastic covering.

Lundin's art exhibit began with a wall formed out of 12-foot-long pieces of forming plywood from Eagle Plywood and foam from Universal Foam bond together with Sansoe Snaptyes. Representing adjoining walls like the ones found in parking garages around the country, they were covered with a wide array of Kingdom Products, from the Imperial Core Bond base and Vertical Carving Mix to the Feather-Fast mortar, Metallic FX mica and the acrylic Regal Seal.

A stone bench underneath a faux bois umbrella welcomes weary travelers to sit and rest awhile, sheltered from the elements and surrounded by the beauty of a rain shower.

Against a swirl textured gray background representing

the wind, individually molded raindrops dance along the walls in all colors of the rainbow. Throughout WOC, attendees were invited to become part of the art project by coloring their own raindrops which were then attached to the wall.

"This will truly represent all people coming together to make one art composition at the World of Concrete," Lundin writes in her interpretation.

"And at the end of the day," Gera concludes, "it all worked. To get through something like this in a short amount of time with so many different manufacturers, products and people means we did something right." 🛠️

Wide Array of Products at World of Concrete Offers Solid Solutions and Creative Courses

by Stacey Enesey Klemenc

THE 45th edition of the World of Concrete bustled with nearly 54,000 registrants packing the halls and spilling over into the outside exhibit areas at the Las Vegas Convention Center Feb. 4-7. Featuring 1,310 companies from throughout North America and 29 countries outside the United States — including 255 brand new ones — the annual expo succeeded in being a very strong event for the concrete and masonry industries.

There were many reveals and new products introduced and demonstrated at the show, including Trimaco's Aqua Shield FR which was used at the 2020 Decorative Concrete LIVE! exhibit in the Silver Lot across from the entrance to the South Hall.



This flame-retardant, reusable floor protection system comes in a signature aqua color that's hard to miss. Quick and easy to install, it requires no adhesive to hold it in place except for tape on the perimeter. Extremely durable with embossed tread to increase safety on the job site, Aqua Shield comes in multiple thicknesses up to 40 mil. It's heavy duty to the max, able to withstand shoveled concrete without showing any wear and tear during construction and is very popular with hospitals and data farms.

www.trimaco.com

Candidates for a Most Innovative Product (MIP) award, Duro-Nox HS and Duro-Nox HSC from Nox-Crete are hybrid silicates that offer the best of both worlds — a potassium component

that creates a sheen that makes the surface “pop” and lithium for a deep penetration that promotes better long-term performance and durability.

The HS (high solid formula) densifier is designed to harden, densify and seal naturally colored concrete that hasn't been troweled aggressively. It reduces the porosity of concrete surfaces to improve their chemical and stain resistance. The HSC (color formula) contains lower solids and is designed to densify freshly placed hard-troweled concrete, or concrete that's been integrally colored, dyed or stained. Both formulas work especially well on burnished or polished surfaces including countertops.

Because of their chemical makeup, the water-based HS and HSC densifiers don't need to be rinsed after application, eliminating the hassle and costs of disposing hazardous rinse water associated with traditional silicate floor hardeners.

www.nox-crete.com



With the addition of the new 60V 1-3/4-inch SDS Max Combination Hammer, DeWalt now boasts the largest offering of cordless rotary hammer combos in the construction industry. The tool is equipped with constant speed control which allows it to maintain rpm regardless of bit size or depth, as well as a variable speed dial for accurate hole starting and controlled chipping. The 15-pound hammer also has wireless tool control so users can pair it with a dust extractor that automatically turns on and off in synch with the hammer.

www.dewalt.com



Wagner Meters has marked its newest achievements with an eye-catching color change ... so it's out with the orange and in with the green on all models going forward. The Rapid RH L6 system, an enhanced version of its popular predecessor that received an MIP award as the industry choice in the Business Tools & Technology category, has further simplified the concrete moisture testing process while incorporating advanced technology that makes reporting faster, easier and even more reliable.

The new DataGrabber, a self-contained device that fits inside the L6's smart sensor, will engage the sensor to store up to 512 time-stamped concrete temperature and relative humidity readings at set times. The automated data logger comes in a Bluetooth version for wireless control.

www.wagnermeters.com

Rich Sanders of Clemons Concrete Coatings reports that people are more educated about the benefits of concrete sealers and are requesting them more because they want to protect their investments. Many are leaning toward penetrating hybrid sealers such as Supreme Shield that enhances the color of the concrete without forming a film and penetrating sealers made with silane and siloxane.

These include the water-based SuperSeal M that protects from salt and freeze/thaw damage with its

water-repelling properties or Super Sealer S10, a solvent-based water repellent that offers similar protection. Both of the latter products offer invisible protection that doesn't alter concrete's natural appearance.

www.clemonsconcretecoatings.com

When precision is paramount, the Aqix from Collomix can guarantee you'll achieve the right water ratio for all your mixes. With the push of a button, the water-dosing device automatically measures quarts, gallons and liters to an accuracy of .1 of the set amount and cuts off when not in use. It attaches to a hose, hooks to a bucket and runs off two AA batteries, which typically last a full year with regular use. The idea is so simple you've got to wonder why this automatic shut-off tool wasn't invented sooner.



www.collomix.us



To extend the life of concrete in coastal communities as well as areas prone to freeze/thaw cycles, the Salt Protector Plus line of sealers from TK Products deeply penetrates the concrete surface and forms a barrier that repels salt and water, as evidenced by its incredible water-beading action. It's designed to protect the cement matrix in a variety of surfaces with formulations available for DOT, commercial and residential applications. Salt Protector Plus doesn't deter slip resistance, has no gloss and doesn't have to be removed if the surface is recoated. In fact, its presence promotes adhesion with other topical sealers and coatings.

www.tkproducts.com



During the show Makinex Construction Products unleashed the Beast, a 23kw dual-phase 480V generator equipped to run a three-phase and single-phase piece of equipment such as a grinder and a vacuum at the same time. Made in the USA, the Beast is one-third the size and weight of comparable generators and easily fits in an equipment trailer or truck, as well as through a standard doorway. One tank of gas lasts about 10 hours. The Beast was the industry choice for an MIP award for General Construction Tools & Equipment.

www.makinex.com



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PRODUCT NEWS

Specifically designed to be compact in form yet powerful in performance, the multihead Rhino RL500 Grinder from New Grind was a welcome addition to the lineup of machines used during this year's Decorative Concrete LIVE! The electric machine's sleek design with its 20-inch footprint and multiarticulating handle make transport easy and grinding possible in tight spaces within 1/8 inch from walls. To increase the 10 HP, 500-pound machine's production rate, up to 360 pounds of standard Olympic weights can be added onto built-in posts. The weights are available as an accessory.



www.newgrind.com

Another MIP contestant, SkudoBoard Column Guard is a flexible version of SkudoBoard designed specifically for columns and pillars that's highly impact resistant, stays in place and won't unravel. The reusable synthetic guard is much lighter and more convenient to use than cumbersome Masonite or plywood and protects the columns from everything from splatters and scuff marks to forklifts and carts.



Also high in the rugged department, Skudo All-Terrain Mat provides an extremely durable traffic path for walkways on loose ground outside construction trailers to keep the mud-tracking down. In our case, it was a perfect product to create a safe walkway for this year's Decorative Concrete LIVE!

www.skudousa.com



Ecoscape, a pavement that's touted to be climate smart, is an environmentally responsible covering that has so many good things in its plus column. It reduces CO₂ emissions, conserves water, helps replenish groundwater and uses less cement than traditional concrete. Using a patent-pending system, contractors can make and install aesthetically pleasing hardscapes on-site.

The process involves installing a layer of rock to store water and topping it with a layer of smaller aggregate that's sprayed with a cementitious slurry to form permeable concrete. After the slurry has been applied, Ecoscape+ is used for the decorative finish, which is available in 28 colors. The integrally colored hardscape can be scored, stamped or further colored. It can be used for driveways, patios, sidewalks and parks that not only reduce water runoff but also retain water on-site.

www.ecoscapepavement.com



Instead of a trailer-sized jacking system to fix uneven driveways, porches or patios plagued with eroding substrates, contractors can use the innovative SealBoss 1640 SlabLifter to get the job done at a fraction of the price. The polyurethane slab-lifting system is designed for small to medium-sized jobs where a crew drills predetermined holes in the slab and pumps the structural foam into them until the slab is level again. The special two-component material is used with an SLP-2C pump, also referred to as a suitcase pump, and will react when dispensed and fully cure in three to five minutes. Training is available for this technique commonly referred to as foam or poly jacking.

www.sealboss.com

The Imer Mix 120 Plus, a very portable vertical shaft mixer, was an indispensable addition to this year's Decorative Concrete LIVE! Fitted with an I-Dust grate vacuum attached to the lid that pulls the dust downward into the container, it can be used to mix concrete, mortar, stucco, grout and dry-pack cement. Fast and furious, it can make a wheelbarrow full of any of those products every 3 minutes.



The mixer is not only extremely easy to use but also easy to maneuver. It can be pulled around like a cart on four wheels or tilted and pushed on two. And if it ever needs to be lifted into place by a crane, it's outfitted with lift hooks.

www.imerusa.com



Quikrete introduced a trowel-grade version of its popular Re-Cap material, a blend of portland cement, sand, polymers and other proprietary additives that can be used to repair spalled, cracked or pitted concrete surfaces from 1/16 inch to 1/2 inch. Trowel Grade Re-Cap has a bond strength four times greater than the concrete itself so the concrete substrate will fracture before the bond breaks. Repaired surfaces can be walked on in 3 hours and driven on in 24. While Re-Cap finishes hard and smooth, it can also provide a skid-resistant surface by dragging a broom or brush over the surface.

www.quikrete.com

▼ To protect the parking lot underneath the Decorative Concrete LIVE! exhibit during the 2020 World of Concrete, volunteers first laid down a layer of ISI Building Products' Viper II, an under-slab vapor barrier that blocks moisture migration and soil gas threats in commercial and residential applications. Engineered with superior resistance against punctures, tears and water vapor, Viper II is made with virgin resin that contributes to its long-term stability and prevents it from breaking down when buried below the slab.

www.isibp.com



Superabrasive's hottest item on display this year was its first power trowel, the Lavina propane-driven LP36. Equipped with the Trowel Shine system for grinding and polishing, the 6-foot ride-on trowel features a continuously variable transmission which provides optimum torque and speed during all phases of the finishing process.

Also debuted from the company's Elite Series were two new 115-volt grinders — L14E and L16E.

L14E is a 13.2-inch single-head variable speed grinder, and L16E has forced planetary drive with three 7-inch heads. Both machines are very light and compact, and can be easily folded or separated in two pieces for transportation and storage.

www.superabrasive.com



One of the newer tools at the show from Kraft Tool's Elite Series was the Fat Cat Mag Hand Float. Made from an extra-tough extruded magnesium alloy, it is the widest blade Kraft Tool offers, with the largest radius. Each float arrives "broken in" and ready to use. Its cork handle not only ensures a secure grip but also helps wick moisture away while working.

www.krafttool.com

Celebrating its 20th anniversary this year, Convergent Concrete Technologies was out in force displaying its eco-friendly products including Pentra-Cure (MH), a hardener, densifier and curing compound rolled into one. With only one application, this lithium-based treatment provides long-term protection against heavy wear by creating an abrasion-resistant surface.

The product enhances the surface's natural appearance and adds a natural sheen.

www.convergentconcrete.com

Legos look out!

Fox Blocks has an intriguing block set that builders of all ages can't get enough of. Designed for architects, builders, students and engineers, this set of mini insulating concrete forms are 1/8 the size of the real thing. The set comes with 98 blocks, 42 corners and 56 straights.

Manufactured by Airlite Plastics Co., Fox Blocks makes the indoor environment more comfortable for its inhabitants by eliminating moisture intrusion, better controlling air flow, aiding in more accurate climate control and blocking out unwanted noise. And both inside and outside, ICFs can be finished with a wide array of decorative concrete treatments, as demonstrated at Decorative Concrete LIVE!

www.foxblocks.com



Fashioning a Jewel of a Store

Contractor delivers sophisticated floors for Tiffany's temp flagship *Tiffany Flagship Next Door, New York City*

by Joe Maty

DIAMONDS are forever, or so they say.

But not so much with building interiors where diamonds and other luxury items are displayed and sold.

Take the case of the legendary Tiffany & Co. and its longtime flagship store on Fifth Avenue in the bustling Midtown East district of Manhattan. The center of Tiffany's jewelry and specialty high-end retail universe for 70 years, the store closed recently for its first major renovation in decades.

But before this intermission began for the setting of Truman Capote's novel and subsequent 1961 movie "Breakfast at Tiffany's," a good deal of the action was taking place offstage — as in an adjacent building — in late 2019.

There, Tiffany's has set up shop, for the next two years or so, in a building that's being called Tiffany's Pop-Up store or Tiffany Flagship Next Door. For several months in 2019, the store's interior was the center of frenzied activity by a group of construction tradespeople scrambling to transform the space into Tiffany's Pop Up/Flagship Next Door. Among those on the front lines of this campaign was Majestic Flooring Solutions Corp.

Frenzied perhaps, but not



Photo courtesy of Düramen

haphazardly executed, says Aaron Poelker, Majestic Flooring Solutions president. The client, designers CallisonRTKL, and general contractor Structure Tone set a high bar for appearance and performance in the flooring system that Poelker offered as the best option for this daunting project — installing a new flooring

system on levels one through four, all of which looked out into an atrium space.

"The designers wanted a Cadillac floor at Chevy prices," Poelker says. A familiar request for any contractor, perhaps, but the Caddy-quality request was for real. This is Tiffany's, after all, he adds, "So everything has to be perfect."

Going for subtly

The flooring option that eventually won out — a system composed of an epoxy mortar basecoat and a sprayable microtopping topcoat — was proposed after Poelker had floated several other possibilities.

Going in, the design team wanted a polished concrete look. Removing existing flooring of engineered wood and terrazzo to make way for concrete was ruled out as far too costly. Hand-troweled concrete over the existing flooring got a hearing, but after sampling with several colors and borders, this kind of surface exhibited

Project at a Glance

Project: Tiffany's Pop-Up/Store Next Door, New York, New York

Decorative Concrete Contractor: Majestic Flooring Solutions, Ronkonkoma, New York

General Contractor: Structure Tone, New York

Architect: CallisonRTKL, New York

Owner: Tiffany & Co.

Key materials: Düramen Engineered Products' CP1000 acrylic copolymer primer, Arapido cementitious microtopping, Deso Dye, Cast-on aggregate blend and Perdure U90 polyurethane sealer; and Elite Crete Systems' epoxy and silica slurry.

Scope of project: Preparing existing terrazzo and engineered wood flooring surface; installing multicomponent seamless flooring system on four floors of building.

Challenges: Exhaustive investigation and selection of flooring system meeting stringent requirements of owners and designers; logistics in crowded, busy Midtown Manhattan business district; coordination with other trades; accelerated timetable; thorough preparation of existing wood and terrazzo flooring; installing low-thickness flooring system without imperfections over existing floor.



Photos courtesy of Majestic Flooring Solutions

“too much movement,” Poelker says. The design team couldn’t settle on any of these.

Finally, Poelker reached back into his project portfolio and pulled out a microtopping system he had used successfully in previous jobs — the Arapido sprayable cementitious polished concrete microtopping from Düraamen Engineered Products Inc. Following a sample review and an on-site mockup using the complete system of epoxy slurry basecoat and microtopping topcoat, this approach got the OK. The system can be installed over various existing substrates, including the wood and terrazzo combination found on Tiffany’s four levels.

By adding ground-up mica and marble to the microtopping, a contractor can create a monolithic look or a slightly mottled look with subtle movement, Poelker says.

A multifaceted, multistep process

The project got underway with extensive surface preparation that involved grinding the existing terrazzo in the center portion of the floors and sanding the wood flooring in the perimeter areas. A fiberglass scrim was installed along the joints where terrazzo met wood, to serve as reinforcement to prevent buckling or cracking of the new flooring above.

Flooring installation began with troweling a high-strength epoxy slurry, made from epoxy and silica products from Elite Crete Systems. Following an overnight dry, the epoxy surface was repaired and touched up, then sanded and cleaned. An acrylic copolymer primer was applied — Düraamen’s CP1000.

A second primer coat was applied the next day, followed by the sprayable microtopping. When dry, the surface was polished with 100-grit resin pads.

Border and inlay areas of the floor

were highlighted in black, using Düraamen’s Deso Dye concentrate in acetone.

Broadcasting a blend of finely graded aggregates and minerals called “Cast-on,” also from Düraamen, added a flourish to the surface’s appearance. The blend, scattered on the still wet microtopping, produces a marbled polished concrete with a creamy salt-and-pepper concrete look. The material also is reported to boost the flooring’s abrasion resistance.

Next, the process continued with a mist coat of the CP1000 acrylic copolymer sealer, followed by a flood coat of CP1000 and a final topcoat of Düraamen’s Perdure U90 moisture-cured polyurethane.

All the flooring system’s components totaled ¼ inch or less in applied thickness, and the math mattered. The thinness meant elevator and escalator saddles could remain in place, along

PROJECT PROFILE



with the railing system's base along the atrium edge.

Faced with an unyielding project schedule, Majestic Flooring Solutions crews would start on the next level's floor while still completing the level below. The multiple steps for each level's floor were completed in one week, with the total project complete in four.

The impossible made possible

Producing a floor that could meet Tiffany's high standards on a tight deadline was a stern challenge, Poelker says. Add to that the logistics of working in a crowded, fast-paced mid-Manhattan setting, and moving the material and equipment for 18,000 square feet of floor in that environment

without disrupting traffic and pedestrian flow.

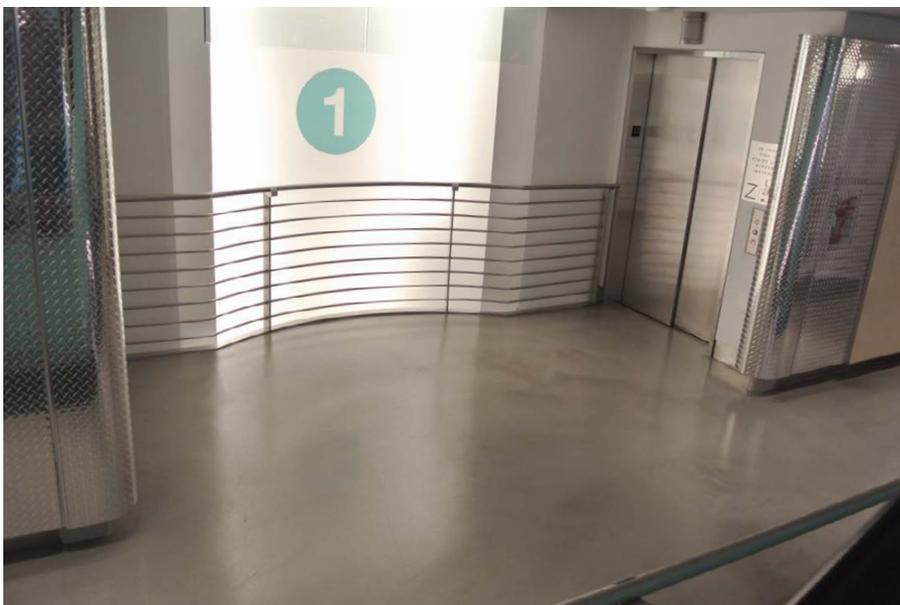
"We had countless meetings with the design and GC team, discussing what they wanted and what we needed to make it happen," Poelker says. Sampling, R&D, planning and scheduling for the project started a year

before work got underway.

Then there was the technical side of the equation — ensuring that preparation was optimal, with no room for the slightest imperfections, as they would be visible in a complex, multicomponent flooring system that was ¼ inch or less thick. That meant keeping other trades off the floor and "walking around in our socks" during installation, Poelker says with a laugh.

The future for Tiffany's Flagship Next Door isn't certain after the real flagship's renovation is complete, but the design team and Majestic Flooring Solutions viewed the project with the same expectations as any high-end job: installing a high-performance, visually intriguing, long-term flooring system up for any service the future may bring.

"It was a monumental task with an aggressive time frame, and you're saying to a major general contractor and a store like Tiffany's that you can do the impossible," Poelker says as he reflected on the project's demands as well as its rewards. "And then to hear, 'wow, they really did it.'" 📱



Photos courtesy of Dürraamen



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FLOORS IN THE FAST LANE

There's a learning curve to maneuver
with polyaspartics

by K. Schipper

ARE POLYASPARTICS
part of your concrete coating mix?
They may not be – yet. The word is
some concrete contractors are
afraid of them because of
their fast set-times.

As with everything, there are trade-offs to using polyaspartics. Understanding how they work in different temperatures and varying amounts of humidity is part of the challenge. However, industry suppliers happily provide information on their products and the training necessary for contractors to deliver at the speed these can require.

Still there are workarounds, and changes to their formulations mean it doesn't always have to be 100 mph to the door. And, in exchange for those fast set-times, not only can jobs be completed much more quickly than with other coatings, but the finished product is a thick, durable coat that's UV-resistant.



This floor in a Select Milk Producers Inc. facility features SikaFloor 510 LPL, a clear two-component, solvent-free, high-solids, low-viscosity, polyaspartic resin system. The polyaspartic is designed to be installed as a clear topcoat over a quartz or flake broadcast system where a low-VOC, quick-cure, UV-resistant finish coat is necessary. It was installed by T.W. Hicks Inc. of Lake Dallas, Texas.

Photo courtesy of Covestro



The importance of moisture protection can't be forgotten. Laticrete, for instance, has developed an epoxy vapor barrier for polyaspartic projects which cures in two-to-three hours to help keep projects on a one-day schedule.

Photo courtesy of Laticrete

SPREADING THE NEWS

While some concrete contractors may still not be familiar with polyaspartics, they've had a place on flooring since the 1990s.

Steven Reinstadtler, infrastructure marketing manager for Pittsburgh-based Covestro LLC in Pennsylvania, notes Covestro developed the first polyaspartic coating resins in the 1980s, but they weren't for the concrete industry.

"There was an unmet need in the protective and marine market segment," he explains. "Asset owners and engineers were looking for a faster-curing, higher-film-build coating for those markets, primarily bridges. What they really wanted was something faster curing which could reduce the downtime and detour costs. Plus, with a higher film-build, in many cases you could eliminate a coat."

It took the realization that polyaspartic coatings would work in a host of other areas that really opened the market for the product. Although Covestro held a patent on the resins, other formulators could use the formulations and resin raw materials. Starting in the 1990s, several dozen other coating manufacturers offered a formulated polyaspartic coating, as well.

While the combination of polyaspartic resins and aliphatic hardeners isn't that much different from polyurethane coatings in terms of durability, what sets them apart are the same things Covestro initially sought with its bridge coatings.

"It's fast-cure technology," says Jeff Bonkiewicz, a channel manager with Bethany, Connecticut-based Laticrete International. "Within our product category of floorings, the cure times range from about an hour-and-a-half to two-and-a-half hours, depending on conditions."



Photos courtesy of Seman Flooring

A polyaspartic from the Laticrete Spartacote line was specified as the coating for a linen room at UPMC Magee-Women's Hospital in Pittsburgh.

For that reason alone, it's understandable that polyaspartics can be very attractive in certain situations.

"I recommend it for jobs that have narrow windows of application," says Glenn "Buster" Osteen, technical director for McKinnon Materials in Tampa, Florida. "Say you have a facility that's going to close at 7 o'clock in the evening, and you're expected to strip the floor of the coating that's on there now, prep the floor, reinstall an entire floor system and let people back on it by 7 the next morning."

A good example is a current job by Seman Flooring of Washington, Pennsylvania. Company owner Bob Seman says he's been using polyaspartics for about 10 years and found the product to be a must when he was hired to do a linen room at UPMC Magee-Women's Hospital in Pittsburgh.

"They were looking for both a low-odor product and a fast-drying one," he says. "The linen room is so busy that it needed to be done in three phases." During one of these phases, "We were able to start work at 7 p.m. and at 6 the next day they were moving linens through the hospital."



Seman Flooring only had a two-day window to remove the existing floor coating and install a new polyaspartic floor system in the employee café at Nemaocolin Woodlands, a five-star resort in the Laurel Highlands of Southwestern Pennsylvania.

A HOST OF FORMULATIONS

That polyaspartics can be low odor makes them doubly attractive in situations such as Seman's hospital project and another one the company completed at Nemaocolin Woodlands Resort in Farmington, Pennsylvania. In general, the amount of solids-to-solvents in a product determines how much odor it will emit, a boon in occupied buildings and in states such as California where VOCs are closely monitored.

"Those products with more solvents added have a strong odor to them, but over the last three to four years

we've been implementing products with extremely low odor," says Jimmy McGhee, technical director of Versatile in Anaheim, California. "We didn't have the technology to do that even five years ago, but we're switching to low-odor formulations, and our products are accepted across the country."

Depending on the percentage of solids in the formulation, polyaspartics can also offer a very thick product, McGhee says. The result is something that's high gloss, easy to keep clean and chemical-resistant. It also offers UV-stability that other products don't provide.



Photo courtesy of Versatile

The 5018 Matte Finish Polyaspartic from Versatile was chosen for this residential project where a low gloss/low sheen finish was preferred.

With those attributes it's hard to think why everyone wouldn't fall in love with polyaspartics. However, if they have a drawback, it's that they can be tricky to work with. Covestro's Reinstadtler says even an experienced contractor without specific experience using polyaspartics is likely to stumble.

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The reason: they can be catalyzed by humidity or moisture, whether it's moisture in the slab or humidity in the air. In either case, it can shorten the working time.

"Say they're living in Houston and they start using polyaspartics in the wintertime," he postulates. "Everything is great, and they've got a nice, long working time. But then they go to use it in August, and that working time of 30 or 40 minutes is suddenly only 20."

Johnny Angel of Rocky Mountain Hard Rock Flooring in Billings, Montana, says that's the exact situation he found himself in early in his career working with polyaspartics. After doing several cold-weather jobs, the weather warmed up.

"It was the biggest learning curve of my life," he says with a laugh. "When you lose a couple thousand dollars in product it's an eye-opener."

However, weather isn't the only determining factor in how a product will work.

"There are different formulations within the polyaspartic category," says Laticrete's Bonkiewicz. "It depends on the number of solids your polyaspartic has. The lower it is in solids, the easier it is to work with. We manufacturers are constantly tweaking the formula to get a better formulation that's going to be more contractor friendly, as well as offer better performance."

Because it's not going to apply the same, depending on the product and conditions, McKinnon's Osteen says, "You have to have your technique for application spot on."

It's also the biggest reason manufacturers urge contractors to get training on polyaspartics, so they understand them and are comfortable with their application before taking that first job. It's a recommendation Angel seconds.

"We'll ask them to come to our training sessions, which we hold monthly," says Versatile's McGhee. "We want to show them hands-on how to apply these products because we don't want them having limited experience and then running into trouble."

Polyaspartic systems work remarkably like other concrete products — only faster. Color flakes and quartz are popular, and some installers find metallics, like Aurora Epoxy Dust from McKinnon Materials, end up looking like acid stains.

Photo courtesy of Rocky Mountain Hard Rock Flooring

Bonkiewicz agrees that in-person training is the best way to get acquainted with polyaspartic applications. He also suggests taking a class in moisture remediation, which can also be an issue.

“And, it’s also important for contractors to get to know their technical sales representatives,” he adds. “They’re going to be able to provide good field support and expertise. If something goes wrong on the job, they have someone they can rely on for help.”

PREP FOR SUCCESS

While training on using the products is key, when it comes to prep, the techniques are familiar. Generally, the prep for applying polyaspartics is similar to what’s done for other floor coatings.

Buck Collins, owner of Collins Concrete Coatings in Ashburn, Virginia, says his company prepares for the installation of polyaspartic resins starting with a diamond grind of the substrate.

“After that, we repair any spalls or spider cracks using a product that fully cures at 70 degrees in about 15 minutes,” he says. “We also grind that material. Once the floor is clean and vacuuming has been done, we’re ready to coat.”

“We require a concrete surface profile or CSP of 2 for our polyaspartics,” echoes Laticrete’s Bonkiewicz. “We also prefer they do a moisture test before they put down any materials. We generally find the two largest reasons for product failure or job failure are improper surface prep or moisture issues.”

One recent development in polyaspartics that has been made by changes in formulations is the development of a matte finish for customers who don’t necessarily want a high-gloss floor. Versatile was first-to-the-market with what McGhee calls a “deglossed surface.”

“We’ve been trying to come up with a matte finish because there are a lot of jobs out there where the customers don’t like high gloss,” he says. “There really wasn’t an option out there except with water-based products, but the water-based don’t last as long.”

FUTURE FORECAST IS PROMISING

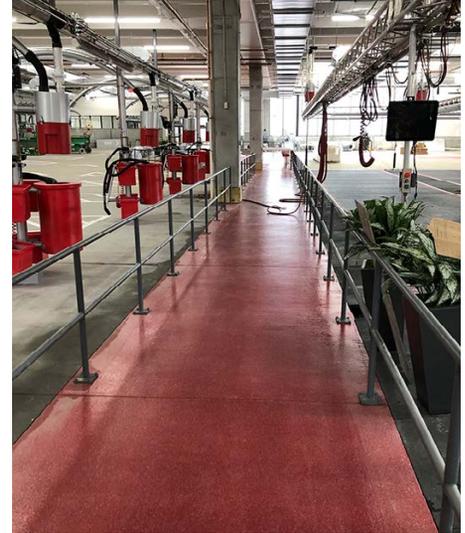
So, where are polyaspartics going? Some contractors are already extending their use as a topcoat over a flexible thicker aromatic waterproofing coating in exterior applications where concrete has movement, such as balconies, terraces and concrete decks.

New developments also allow formulators to make flexible, 100% solids polyaspartic coatings that can be a waterproofing layer and a weather-stable topcoat all in one.

In the future, some manufacturers see the demand for them equaling that of urethanes. And, more moisture mitigation materials and more formulations that produce a matte finish are already on the horizon.

As for contractors already using polyaspartics, they believe they’re here to stay. And, while Seman says longer working times would top his list of possible improvements for the product, he adds, “It’s easy to like the idea of applying a coat, and an hour later you’re applying the next coat. But those are the jobs where you need to have the extra guys and the more-experienced ones. You have to be careful and cautious and not let the product get ahead of you.”

For those new to the product, Angel offers the advice he wished



Polyaspartics are great in harsh environments or where a lot of water is present, such as at this car wash in Vienna, Virginia. In this case, the contractor, Collins Concrete Coatings, used a custom chip system with a polyaspartic to delineate where pedestrians could safely walk.

Photo courtesy of Collins Concrete Coatings

he’d taken early on using polyaspartics and gotten some knowledgeable help from the get-go.

“If somebody goes and buys some and it sets up too fast and they have to redo the project, they’ll bad-mouth it and say it’s the worst thing,” he says. “You have to understand you need to ask for help.”

www.collinsconcretecoatings.com

www.covestro.com

www.versatile.net

www.laticrete.com

www.mckinnonmaterials.com

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Keeping Tabs on Tabby

How to master an old way in the new world

The columns and parts of the foundation of the Dataw Island Club in St. Helena, South Carolina, are finished with tabby, a type of concrete made by burning oyster shells to create lime and then mixing it with water, sand, ash and broken oyster shell.

Photos courtesy of Jack Aldrich

By Stacey Enesey Klemenc

IN a world where construction projects are dominated by cutting edge products and constantly evolving technology, Jack Aldrich wants to do his share of preserving the “old ways” that have typically been passed on from generation to generation.

Building is in his blood, he says. His grandfather was a carpenter and blacksmith, his father a builder/developer and his brother a builder. And he’s been fortunate enough to have been trained by Alex Skellon, a master mason and owner of Scottish Stone Craft, a company that has restored a multitude of historic buildings, sites and monuments in Scotland, England and the U.S. Skellon’s extensive portfolio includes plantations, notable houses and several lighthouses.

Aldrich’s travels have taken him up and down the East Coast where he’s worked on a fair share of historic restoration projects from New England to Florida, with stopovers in Williamsburg, Virginia; St. Simons, Georgia; and Beaufort, South Carolina.

“My trade is vintage workmanship and old school craftsmanship,” says

Aldrich, who’s currently director of facilities and maintenance for the Dataw Island Club in St. Helena, South Carolina, near Beaufort. “And I want to share what I’ve learned” ... beginning with tabby, a finish that was once very common in the Lowcountry of South Carolina and Georgia, as well as coastal districts in Europe.

A little history

Tabby is an old-fashioned concrete that’s made by burning oyster shells to create lime and then mixing it with water, sand, ash, and crushed oyster and coquina shells, Aldrich says. Parts of the Dataw Island Club’s visible foundation and the massive columns that support the porte-cochere at the entrance are finished with tabby.

The clubhouse, one of the largest special event facilities in the area, is situated near Sams Plantation, a site dating back to the late 18th century that’s listed in the National Register of Historic Places. It consists of the archaeologically significant remains and ruins of at least 12 tabby structures, including the main house and an

entirely intact smokehouse with the only pitched tabby roof known to exist in the U.S.

When the architects designed the clubhouse back in the late ’80s, they specified tabby as one of the finishes so the structure would tie in with the nearby ruins.

Patching at its best

In 2018, a beer truck making a delivery ran into railing that lined the roof of the porte-cochere. Subsequently, the railing was removed and the tabby columns that it was attached to needed repair.

The first order involved making the tabby. Aldrich used white sand and white cement “to mimic the wash they did back in the day made from oyster shell and lime.” After it’s applied, he blends that with coquina shells and what’s called “chicken scratch,” very small pieces of crushed oyster shell, to get the mixture just the right shade of white with hints of purple.

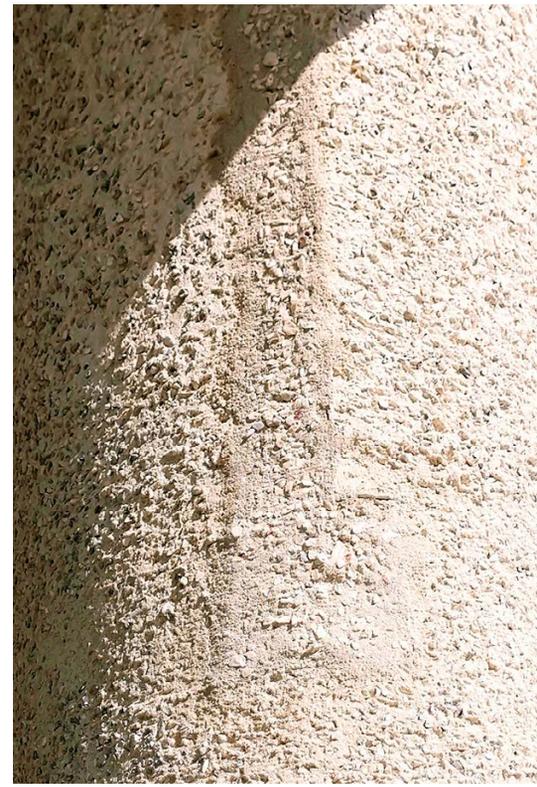
He says he dug up the shells at a nearby beach. “Mason places around here sell small crushed oyster shell but it’s bleached so much it’s almost too



In 2018, a beer truck damaged the clubhouse's wooden rail system and parts of it had to be removed.



This left an area that needed to be patched with tabby.



If the finish is matched and mixed correctly, in time casual onlookers won't even notice the repair.

white," Aldrich says. Using the right kind of shells and sand is key to getting the mixture right and not too yellow.

"It's important to use white sand and white cement and to mix it three parts sand to one part white cement," he says. Then add water until you get a stiff consistency. "The mixture shouldn't leave any marks on your hands when you grab it," he says. "It should have a consistency almost like bread dough. If it's too wet, it will smear on."

Next, he says, use water to dampen the area that needs to be patched and trowel on the white cement mixture. Once the mixture is placed, it's time to add the shells. Begin by troweling in a handful or so of very small and crushed shells.



To make authentic-looking tabby, mix three parts white sand to one part white cement and cover the applied mortar with tiny shells and broken bits.

Next, throw a small shell mixture at the patch area, followed by larger shells. Repeat this action until the area is sufficiently covered.

When repairing a column that requires a ladder to reach, Aldrich shares a trick that saves steps, cuts down on waste and makes cleanup easier. Before throwing the shells, tie the sleeves of a long-sleeved sweatshirt around the column and tuck the hood into your pants to create an apron to catch all the extra chicken scratch shell mixture that doesn't stick. Then you

can throw it again and again.

To help make cleanup easier still, he adds, cover the area beneath the patching job with rubber mats.

When applying the tabby in hot weather, use a water spritzer to mist the patch area so it doesn't set up as quickly.

As a final touch, use a paint brush to blend the shells together and create a feathered look.

Follow his advice, Aldrich says, "And even though it's still a patch, in time you won't notice it. It'll blend right in." 🗑️



When it Comes to Polished Concrete, Maintenance is a Must to Ensure a Long Life

by Travis Larsen

LIKE many in the restaurant industry, we have converted our dining room floors over to polished concrete. Many people believe that a correctly installed polished floor is a one-time thing. It's concrete, right? It'll last forever.

This is only true when you understand and implement a proper maintenance plan. Otherwise, the floors can deteriorate quickly.

Properly maintained floors give locations the awesome feel and pop that polished concrete is known for. The following plan fits our concept and traffic and outlines what a proper care and maintenance program entails. Depending on the business and traffic, this schedule may need to be adjusted.

Daily cleaning

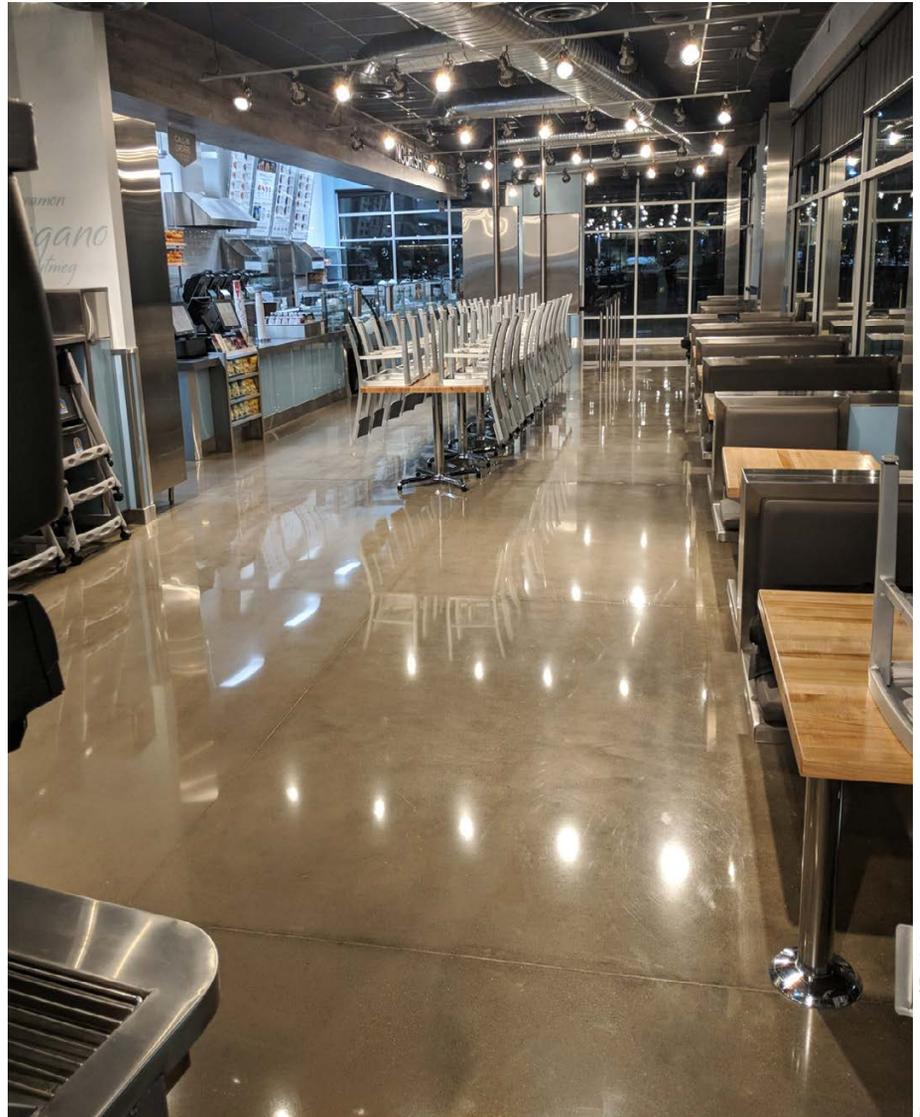
Polishing contractors should inform clients that using the correct chemicals to clean the floor is an absolute must. Many people mistakenly use products that contain harsh chemicals that destroy the floor's finish in just a few weeks. As part of our daily routine, we use an environmentally friendly maintenance cleaner specifically designed for concrete floors that are treated with lithium silicate hardening/densifying products. The product safely removes common soiling without affecting the shine.

Dirt, salt, oil, food and other items left on the floor are our enemy and will do damage. Dirt on the floor that's walked on by hundreds of people acts like sandpaper and slowly wears small scratches in the surface. Ice-melt salt can eat away at the concrete, as will highly acidic foods such as tomatoes.

Daily and even mid-day cleaning is the easiest way to minimize this impact and increase the floor's longevity.

Biannual burnishing

We contract with a janitorial company that comes in every six months and auto scrubs the floor with a product that's specifically designed



Photos courtesy of Travis Larsen

Café Zupas, a national restaurant company, are among the many eateries across the country that have opted for polished concrete in their dining rooms. To keep the floors in good shape, administrators recognize the importance of a proper maintenance program.

for auto-scrubbers before burnishing the surface with a propane burnisher. A propane burnisher is a must to get the necessary speed for the stain protect to pop again.

Per our request, the company uses an 800-grit pad. Any higher grit and the crew would be working the floor all night with less effect. And a lower grit will scratch the floor and actually do more damage than good.

Once they're done burnishing, we

get them to take 12 gloss readings on the floor. This helps us understand the floor's condition and determine if any areas require additional help.

Floors deteriorate over time and we expect the floors to decrease three to four points in gloss between each biannual burnishing. If the floor dropped 20 points in a six-month period, we'd know that some external factor — such as ice melt or a harsh cleaner — is contributing to its decline.



Exposed nails on the bottom of chairs are the culprits of some nasty scratches on polished concrete floors and the reason why some floors need more aggressive maintenance programs.

Every four to six years

Once the floors have dropped in gloss approximately 20 points, restaurant owners like myself should expect to have another layer of stain protect applied. Done in lieu of the biannual burnishing, this service should bring the floor back to its original gloss or very close to it. Six months later, it will be time for the biannual service to resume.

This is where it gets a little tricky as far as gloss goes. Service companies can apply stain protection to a floor incorrectly and the gloss reading will still jump back up to the desired levels. For instance, running a burnisher too fast and not getting the chemical to set will achieve an initial pop. However, within the next few weeks, the chemical will wear off and the floors are back to where they were. Putting the chemical on too thin can also cause issues.

The most important thing to do when judging a floor is to have pictures taken looking straight down. Pictures at an angle always look amazing but when you look straight down you'll get a true read on the floor.

If the floor's done correctly you should clearly see the light fixtures above you. You shouldn't see haloes, splotches, scratches or streaking. Each of these items is an indication of the floor not receiving the proper maintenance.

Every seven years or so

After about seven years, we find that the scratches, oils and all-around damage to the floor requires us to have the floor refurbished more aggressively and to a higher level. This is done with the same type of equipment that originally polished the floor.

As I mentioned earlier, we use a janitorial service for the biannual and four-to-six-year services. This more intense level of work on a floor, however, will be outside most janitorial companies' expertise. It requires a company that primarily polishes concrete floors with specialized equipment. The grinders are big and heavy and if used incorrectly can damage the floor, as well as anything in their path.

We require the polishing contractor to polish the floors with a three or four head, 850+ pound machine using 100, 200, 400, 800 and 1,500-grit resin diamonds. Once this is complete, we ask for gloss meter readings prior to having them apply the stain protect. Once the gloss level is confirmed, the stain protect is applied and the floor is ready to go for another seven-plus years.

Final thoughts

Make sure your clients understand all the factors that contribute to a floor's deterioration and what process is needed to refurbish a floor. Over the past few years, we've had three major issues that have affected the look and condition of our floors. It's important for restaurant owners to clearly understand why floors deteriorate and try to minimize the impacts.

We have many stores that used incorrect chemicals on the floors and after a short amount of time we had to have the floors restained. Instead of every four years, these floors needed to be stained every 18 to 24 months.

In other instances, chairs with metal nails in the feet scratched the floors each time someone slid in and out. These scratches were so deep the floor needed the more aggressive seven-year process in a couple of years.

And finally there's daily cleaning. Cleaning the floor with the appropriate cleaner and equipment is critical. If it's not cleaned often, the wear patterns and damage to the floor gets exponentially worse. 🛠️

Travis Larsen, CRFP, is the vice president of construction and facilities for Café Zupas, a national restaurant company. With more than 20 years of experience in the commercial restaurant construction and facilities industry, he has a broad knowledge of construction and flooring materials. Larsen enjoys teaching and sharing his knowledge with others. You can reach him at tlarsen@cafezupas.com.

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No Lonely Repairman

Concrete sealer uglies always get callbacks

By Tyler Stephens

IMAGINE the perfect concrete sealing day — 70 degrees, sunny and no rain for the next 10 days. You just finished sealing a beautiful concrete pool deck. The homeowner loves it, and it looks so good that the next-door neighbor has asked for a quote.

The homeowner pays you on the spot (which was a huge blessing as you really need that check to cover payroll tomorrow). So, you pack up, say goodbye and move on to the next job, with the possibility of being done for the day around 3-3:30. That's what I call a stress-free day and I truly love them.

The next day is a different story. As the sealer dries and cures, the mistakes in the application process begin to show up. I call these issues “sealer uglies,” situations where something doesn't look right.

Homeowners will call the next day if there are any “sealer ugly” issues with the completed job, and they should. Don't take it personal. Don't argue with the homeowner. Just go fix it. When you circle back to fix the ugly sealing error, learn from it.

When it comes to sealing concrete, you need to remember one simple thing. Concrete sealer is a liquid coating that's either rolled or sprayed onto a porous concrete surface.

As you apply the sealer, you must account for real-world variables like temperature, rain forecast, time of day, type of sealer being applied, type of concrete finish, employees, mowers, sprinklers, wind, leaves and homeowners.

All these variables can lead to an ugly sealing job. I had to learn about these application variables the hard way, but since have figured out how to minimize concrete sealer ugly problems. Then I had to train my staff to understand the sealer uglies and how to avoid them.

Here are the most common concrete sealer uglies that we deal with regularly at Stephens Concrete Sealing.



Photos courtesy of Tyler Stephens

Surface bubbles

Bubbles are caused by a heavy application of sealer or sealer that's applied to a hot surface. When the sealer is applied too heavily, the air displaced can't escape through the surface, and it forms bubbles in the sealer surface.

When it's 95 degrees outside the concrete is 105 degrees. The outgassing from the concrete can't escape because the sealer flashed off too fast.



Remedy? Apply the sealer early in the morning before the heat of the day or reschedule the work to a cooler day.

Blushing, haziness or cloudiness

A cloudy-looking surface is caused by sealing the concrete when the surface is wet or got wet before it fully dried. When this occurs, the sealer won't bond to the concrete surface. Instead, it'll trap the water between the surface and the sealer.

It's easy to dry the surface before applying sealer. But a scattered rain shower or a timed sprinkler session can wet the sealer while it's drying.



Remedy? Remind homeowners to turn off the sprinklers for the day and be mindful of impending rain.

White or powdery look

If the temperature during application is too low or the humidity is too high, the sealer's carrier will evaporate either too fast or too slow. The sealer will dry white or powdery because the resin particles didn't fuse together before drying.



Remedy? Always find out what temperature and humidity conditions manufacturers require for successful application of sealer.

Blotchy or darker in some areas

Typical film-forming acrylic sealers with a higher solids percentage will always darken concrete. Every slab is unique in its color and texture. The color of the concrete after the sealer is applied is difficult to predict.

The mix design, use of chemical admixtures, finishing techniques and

porosity are just a few factors that will affect the concrete surface color. A film-forming sealer will deepen the true color of concrete and create a high gloss or wet look for decorative concrete.

If you apply these sealers to a broom finish, the sealer will bring out the "grain" in concrete just like a varnish does on wood and show all the concrete's imperfections.



Remedy? Do a small sample to make sure the color change will be acceptable to the homeowner.

Endless other variables

Tire marks show because homeowners drove on the sealer too soon. They only waited four hours instead of 24 hours like you told them.

The mowers came and mowed the lawn after you finished and left. They somehow missed the bright pink tape you used to rope off the driveway for no access. They got grass clippings on the sealer.

Mother Nature came calling and blew leaves onto the sealer.

Your employees just didn't do their job right. It was the last job of the day and they were lazy. They cut corners so they could cut out earlier.

Besides these, there are tons of other variables that can affect the outcome of the sealer.

When it comes to sealing concrete, don't underestimate the value of the application. If an ugly pops up or a problem occurs after you've finished, take a deep breath and go fix it. If you try to be perfect on the application, you'll overapply the product or overthink the process. If you try to wait for the perfect weather to seal, you'll never get your work done.

When it comes to sealing concrete know your products, know your capabilities, know your equipment, know your employees' abilities and keep an eye on the weather.

If you get in a jam and get a sealer ugly callback, roll with it. Everything is fixable. If you have a question, email me at the address below or call me. I'm glad to help. 🛠️

Tyler Stephens is president of Stephens Concrete Sealing, a surface restoration, cleaning and sealing company in Indianapolis, Indiana. The family-owned company, founded in 2009, services both homeowners and businesses. Tyler can be reached at (317) 264-9781 or tyler@stephensconcretesealing.com.

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Understanding the Ever-Changing VOC Limits and Regulations for Concrete Sealers and Coatings

by Chris Sullivan

VERY recently I discovered that my home state of Colorado will lower VOC limits for Architectural Industrial and Maintenance (AIM) coatings effective May 20, 2020, and adopt Ozone Transport Commission (OTC) VOC limits.

I'm a bit embarrassed to say that the new law was passed almost one year ago, but I'm just now hearing about it. This confirms that staying up to date with ever-changing VOC laws is a full-time job, and I think state governments don't do a very good job of making industry aware of such changes.

With that in mind, it's a good incentive to review what VOCs are and update how the regulations impact many products used on concrete projects daily.

What are VOCs?

Volatile Organic Compounds (VOCs) are carbon-based gases such as xylene, ethanol, benzene and formaldehyde that are released from certain solvents, plastics or rubber. When the gases are warmed by heat from sunlight, they can combine with nitrogen oxides to create ground-level ozone, or smog.

Unlike the naturally occurring ozone in the upper atmosphere that serves as a barrier against harmful ultraviolet radiation from the sun, ground-level ozone can adversely impact the environment and atmosphere and carry dangerous consequences for humans.

It's important to note that a VOC is different from a hazardous material. Not all chemicals that are VOC emitters are considered hazardous and vice versa. Case in point is acetone, which is considered hazardous because of its volatility, but it's not considered a VOC and falls on the VOC-exempt list of solvents. Proper labeling will indicate



Photos courtesy of Chris Sullivan

when a product is hazardous as well as its VOC contents.

Regulations concerning the manufacture and use of sealers and coatings for concrete have been the source of much discussion and confusion. To try to simplify the matter, the following is a brief summary of how the U.S. Environmental Protection Agency's 1999 Architectural Coating Rule for Volatile Organic Compounds impacts the manufacture and use of sealers and coatings in the concrete industry in 2020.

As mentioned earlier, regulations change often, so do your own research concerning VOC regulations in the region you live or work.

Setting the limits

The EPA published the architectural coatings rule (63 FR 48848) on Sept. 11, 1998, under authority of Section 183(e) of the Clean Air Act. This rule took

effect in 1999 and limits the amount of VOC that manufacturers and importers of architectural coatings can put into their products.

The rule also has container labeling requirements for architectural coatings. There are different options for complying with the VOC limits, including exemptions for products that may be hard to reformulate and/or small quantity manufacturing and packaging (such as samples), but the bottom line is most sealers, coatings, cures, stains, waterproofer and cure-and-seals for concrete fall under these guidelines.

The question then remains: what are the limits for the product I'm using and which guideline does it fall under?

Location, location, location

To answer this question, you must know what category the product you're manufacturing or using falls under



Regulatory Regions

The following is a list of AIM Coatings VOC Regulatory Regions as of Jan. 1, 2020:

Federal AIM – Any state or region not impacted by a multistate or air quality district regulation. www.epa.gov

CARB – California Air Resources Board. Made up of 36 air management districts in the state of California. www.arb.ca.gov/homepage.htm

LADCO – Lake Michigan Air Directors Consortium. Made up of the following states: Ohio, Indiana, Michigan, Illinois, Wisconsin and Minnesota. www.ladco.org/about-us

OTC – The Ozone Transport Commission. Made up of the following states: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and Virginia. www.otcair.org

Maryland – On Jan. 1, 2017, Maryland adopted VOC rules similar to CARB. There is a sell-through period of three years for a product manufactured prior to Jan. 1, 2017.

Delaware – On March 1, 2017, Delaware adopted VOC rules similar to CARB. Products manufactured before March 1, 2017, will be allowed to be sold or used after March 1, 2017.

SCAQMD – South Coast Air Quality Management District. Made up of the following counties in Southern California: Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties. www.aqmd.gov

Utah (Salt Lake City area) – Utah counties of Box Elder, Cache, Davis, Salt Lake, Tooele, Utah and Weber adopted VOC rules similar to CARB. The rest of the state follows federal limits.

Colorado – OTC limits take effect May 20, 2020, for the entire state.

Canada – Canada has standardized VOC limits for the entire country similar to OTC.

Arizona's Maricopa County (Phoenix area) – Low VOC rules similar to OTC. The rest of the state follows federal limits.

(i.e., sealer, coating, stain, etc.) and that region's particular VOC limits. As an installer, most of that work is taken care of by the manufacturer or distributor, but it's still your responsibility to understand the guidelines and work within them.

Regarding sealers and coatings for concrete, there are federal standards, state and multistate group regulations and, in some cases, counties or air quality management districts that have set their own regulations. To complicate matters further there are 13 categories of concrete sealers, coatings, releases and stains, each with its own VOC limit that can vary greatly depending on where you're using the product.

This series of different regulations can complicate matters when determining if a concrete sealer or coating meets the VOC regulations for that area.

So which regulation do you need to follow? It always comes down to the specific product and the regulation governing the region where the product is being applied. What is fine to use in one place may be off limits in another.

When in doubt, check it out

It's important to note that VOC regulations aren't static and changes are always being proposed and implemented. In July 2014, several Northeastern states in the OTC and local California Air Districts proposed amendments. Notably OTC Phase II was approved that year and adopted by Maryland and Delaware. Those changes took effect Jan. 1, 2017.

Seven counties in Utah also adopted OTC Phase II guidelines in 2015 that went into effect in 2017. Most recently Colorado adopted OTC VOC limits that go into effect May 20, 2020.

You can find out the VOC content and category for the sealer or coating you're using by looking at the MSDS or specification sheet for that product. For more information on solvents, VOC regulations and the Architectural Coating Rule for Volatile Organic Compounds (63 FR 48848) check out the resources below. Always check local regulations if you're in doubt about VOC limits. 📱

🌐 www.epa.gov

🌐 www.eaglesealer.com/voc-regulations

🌐 www.chemicalwatch.com/77489/feature-us-states-adopt-tough-line-on-volatile-organic-compounds#overlay-strip

Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. and a member of the Decorative Concrete Hall of Fame. He has led seminars and product demonstrations throughout North America. Reach him at questions@concretedecor.net.

Concrete with a Twist

by Stacey Enesey Klemenc

If it's been said once, it's been said a million times: There's no limit on the possibilities with concrete.

Take, for instance, what can be done with a simple 4-by-4-foot, 1-inch-thick urethane mold. Combined with concrete and four legs, it could be used to make a plain Jane square table. Add a twist of imagination and a flexible cement composite and that same mold can be shaped — again and again with consistent results — into what its SureCrete creators call a warp table.

Part of SureCrete's display at this year's Decorative Concrete LIVE!, the warp table was made on-site with XS Precast, a high-strength concrete countertop mix available in gray or white. With its fibrous components, the mix can be used to create thin yet very durable pieces that don't require reinforcement. And speed also positively figures into the formula. The table was poured at 3 in the afternoon and set out for display at 9 the next morning.



Photo courtesy of SureCrete

To make the table even more appealing, a fire insert was added. The design could have just as easily included a recessed beverage cooler or even a small fountain, says Chris Becker, vice president for marketing and brand management for Fenix, the company that makes and markets SureCrete products. It could also have been stained.

The basic technique used to “warp” the table is easy to repeat, he says. “You wait for the mix to harden to a point where it's firm but pliable. You then elevate the four corners about 12



Photo courtesy of SureCrete

to 16 inches and brace them. For the remainder of the curing process, it holds that shape.”

When the table was demolded and cleaned, it was sealed with XS 327, a two-component urethane that's thinned with water and applied in multiple coats. The first coat is a 7:1 water-to-sealer mix, followed by a second coat that's 5:1 and then a final coat of a 2:1

ratio. Coats should be applied in a quick succession as the mixture dries quickly, Becker says.

The table was such a hit that SureCrete will be adding a craftsman-inspired line of tools to its catalogue. Becker says to expect the urethane mold to be available by May 1. 🛠️

🌐 www.surecretedesign.com



Photo by Concrete Decor staff



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