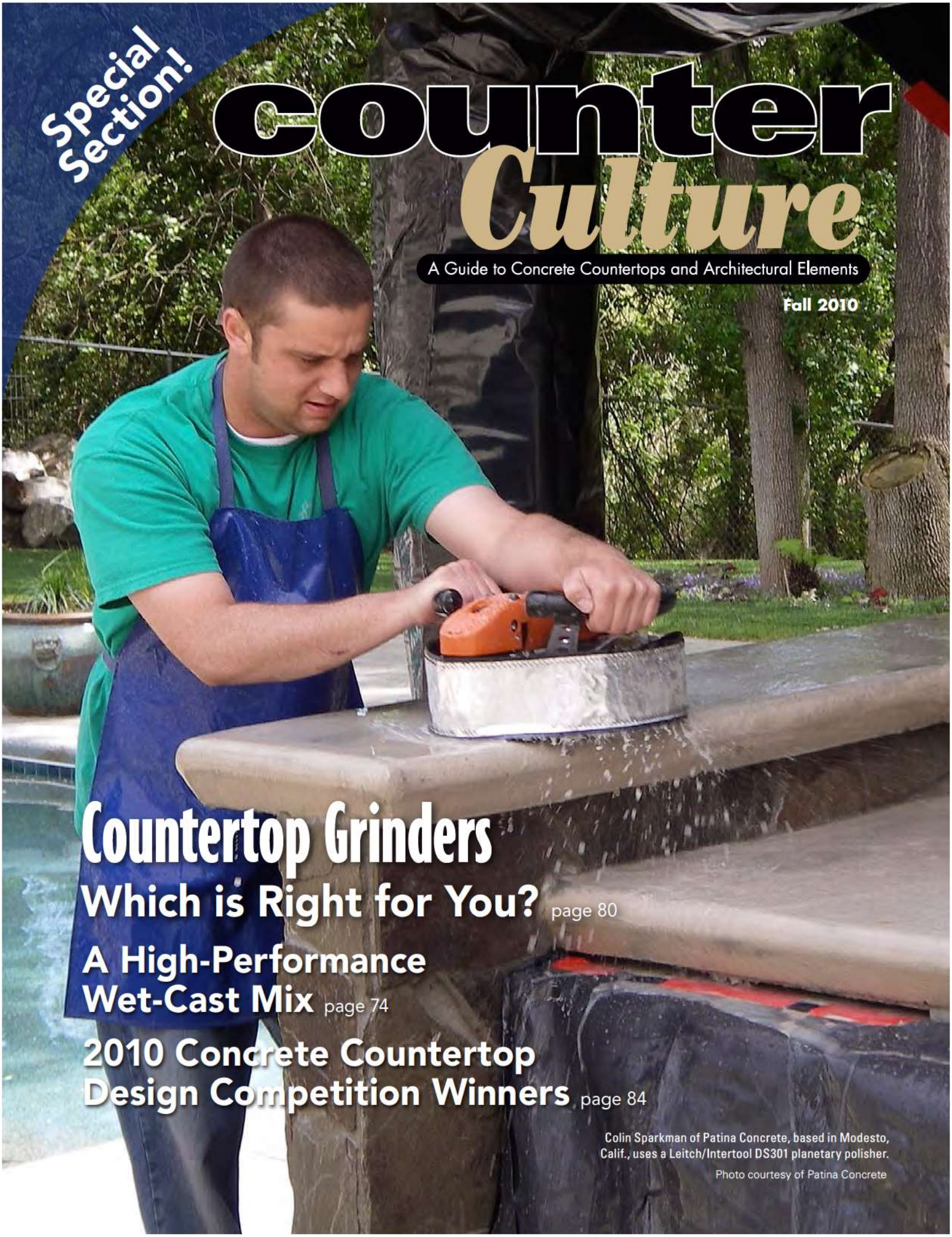
Special Section!

counter Culture

A Guide to Concrete Countertops and Architectural Elements

Fall 2010



Countertop Grinders
Which is Right for You? page 80

A High-Performance Wet-Cast Mix page 74

2010 Concrete Countertop Design Competition Winners page 84

Colin Sparkman of Patina Concrete, based in Modesto, Calif., uses a Leitch/Intertool DS301 planetary polisher.

Photo courtesy of Patina Concrete

High-Performance Mix Design

A Wet-Cast Mix

An introduction and tutorial from a seasoned fabricator

Photos courtesy of Mark Celebuski

This countertop in Lancaster, Pa., was made with Mark Celebuski's standard wet-cast mix and given a hand-crafted finish.

Once you learn volumetric mix design principles you can make mixes that will do almost anything you want.

by Mark Celebuski

When I entered the concrete countertop industry after 25 years in the architectural precast industry, I had a hard time understanding some of the practices in use. There seemed to be a lot of misinformation surrounding the how and why of mix designs when it came to concrete countertops. Some of the practices, such as leaving the countertop in the mold for days on end, made no sense to me. Failures were common.

The industry was (and is) suffering from a lack of overall quality that starts with high-performance mix design.

I'm going to explain the process and ingredients that go into making quality high-performance concrete. Nothing I state should be considered an absolute. Everything from ingredients to casting and curing practices works in concert with everything else to produce a quality end product. There are many different roads leading to an acceptable mix. I'm going to present a few simple principles that will start you down the road. Specifically, I will discuss the components, and then the role of each component, in a typical wet-cast mix.

I learned to design mixes prior to the advent of Microsoft Excel, so a pencil, paper and calculator is all you will need to follow along.

Wet-cast mix ingredients and their respective functions

Cementitious binder: The glue that holds things together. The majority of fabricators use portland type I, so this is what we'll use when designing our basic mixes. Portland cement is ubiquitous. Don't be confused by portland cement that is labeled "type I/II," as this simply means that it meets the ASTM requirements of type I and type II at the same time. Portland can be either white or gray. Portland cement is hydraulic cement, which means that it reacts with water to hydrate. I would recommend finding a good source, preferably local, and sticking with it. Color and chemistry vary considerably from mill to mill.

You could also use CSA cement (calcium sulfoaluminate cement), or exotic cements such as magnesium phosphate cement or geopolymer cements. I would start with portland — get good with it, and then experiment.

Pozzolan: A pozzolan is a material that exhibits cementitious properties when combined with calcium hydroxide, a byproduct of portland cement hydration. You do not need to use pozzolans to make concrete countertops, but you can make denser, stronger concrete when you use them. The use of pozzolans also mitigates ASR (alkali-silica reactivity), which can occur in mixes containing glass or reactive aggregates. Concrete made with a pozzolan may require an accelerator and heat to equal the early strength of concrete made without a pozzolan.

We are going to use VCAS (vitrified calcium aluminosilicate) as our pozzolan. I've tested and used just about every pozzolan over the years and have settled on VCAS as suitably meeting my needs. Some other pozzolans used by countertop makers include silica fume, granulated blast furnace slag, metakaolin, finely ground glass, and fly ash.

Large aggregate: I use a well-graded 3/8-inch minus pea gravel as my large aggregate in wet-cast mixes. You should be able to source this locally. Just about any sound inorganic aggregate can be used to get the look you want. You can use aggregate larger than 3/8-inch but your mix would be less homogenous in thin-section countertops.

Fine aggregate: I use sand made for concrete (conforming to ASTM C-33) rather than gap-graded sand in my wet-cast. Concrete sand conforming to ASTM C-33 is readily available at ready-mix producers or sand quarries. It contains a range of sizes. Gap-graded means that the particles will fit through a certain size of screen (such as No. 30) but not the next size of screen (such as No. 40).

Fibers: I use PVA (polyvinyl alcohol) fiber in wet-cast mixes. Why PVA? I've found PVA fiber works to control drying shrinkage and improve impact resistance.

Basic chemicals: We will be chemically altering our concrete to boost the performance and to impart properties (such as flowability) that make our countertops easier to cast and

A sink crafted by Mark Celebuski. The cement-rich mix had no problems bonding to inlaid stones.

Volumetric Batching: Some Tips for Doing the Math

The concrete industry at large designs mixes using the volumetric method. Fresh concrete is sold by volume, generally by the cubic yard, which is how we will look at it. Divide cubic yard volumes by 27 to get cubic foot volumes.

How much does a cubic yard weigh? How much does a 4-foot by 8-foot slab 1.5 inches thick need in volume? How do you weigh the ingredients that make up that volume? You need to be able to convert volume to weight and back again. It's easy.

All materials have a specific gravity. The specific gravity of water is 1. All other materials' specific gravity is some multiple heavier or lighter than water. Cement has a specific gravity of 3.15, so a given volume of cement is 3.15 times as heavy as the same volume of water. Some materials, such as water (1) and portland cement (3.15), always have the same specific gravity. Sand and stone vary, and the quarry measures this. Sand generally has a specific gravity of 2.60 to 2.75, stone 2.65 (pea gravel) to 2.80 (hard limestone).

A cubic foot of water weighs 62.4 pounds. A cubic foot of cement is 3.15 time as heavy, 196.65 pounds.

You need to do this math for the sand, stone and water in your mix. The key is playing with the numbers until you get the ingredients to add up to 27 cubic feet to make one yard of concrete. From there, simple division gets you the volumes required. In the end you will be able to calculate the volume you need and batch it precisely.

have fewer bug-holes.

▶ **Superplasticizers, aka high-range water reducers:** Super P makes the concrete more fluid without your adding more water. We are going to use Optimum 380, available from FishStone.

▶ **Mid-range water reducers:** We might want to use a mid-range water reducer if we were pouring in place and trowel-finishing our countertops. Mid-range water reducers tend to finish better than high-range water reducers, and what's more, we don't need as fluid a mix in poured-in-place applications. You would use either a mid-range or a high-range water reducer, but not both.

The goal is to get the concrete fluid enough to place without adding water, which weakens the mix.

Additional chemicals: As you get into more advanced mix designs you may want to use these chemicals to further boost your concrete's performance.

▶ **Viscosity-modifying admixtures:** VMAs are used in conjunction with high dosages of superplasticizer. The super makes the concrete more fluid, which can cause the mix to experience segregation. VMAs help prevent this by modifying the viscosity. You have to be careful when dosing, because VMAs can also make it harder for trapped air to migrate through the mix, which can lead to more bug-holes. Just enough to prevent segregation is enough.

High dosages of super plus a VMA are how you make self-consolidating concrete. VMAs were developed to cast concrete underwater with minimal segregation.

▶ **Shrinkage-reducing admixtures:** SRAs help prevent drying shrinkage of concrete. They are also powerful air detrainers. The end result is one component in slab curl and bug-hole prevention. SRA are the most dangerous chemicals that we use, not to us but to the concrete. You can halve the strength of your mix if you overdose with them.

▶ **Nonchloride accelerators:** I use a combination of accelerators and heat to enable me to strip and process our countertops 14 hours after casting using type I portland.

▶ **Qwix:** Qwix is a cementitious calcium sulfoaluminate (CSA) additive used to increase the strength development and ultimate strength of concrete mixes. It also helps reduce porosity and shrinkage. On top of that, Qwix is a very powerful accelerator.

What happens when you use all of the above chemicals in different combinations? I have no idea. I would start building your high-performance mix with the addition of a super P. Determine a dosage that works for you, get a base line, then add other chemicals one at a time and decide if they make your mix better. For instance, an SRA may help keep your slabs from curling and reduce bug-holes, while Qwix may have a similar effect plus act as an accelerator. Using a SRA plus Qwix plus an accelerator? My guess is you'd be lucky to get it out of your mixer on a hot day. Walk before you run.

Recipe for a wet-cast mix

We are going to design our wet-cast mix based on a yield of 1 cubic yard. One cubic yard equals 27 cubic feet. You will use simple volume calculations to arrive at batch weights for your yield.

You will move between weight and volume for each ingredient by dividing the batch weight of each ingredient by the weight per cubic foot of each ingredient to arrive at the batch volume for each ingredient.

Cement: I would stay under 800 pounds per cubic yard for wet-cast countertops. Somewhere around 750 to 800 pounds per cubic yard of cement, the strength curve begins to flat-line, eventually going downward somewhere around 1,200 pounds. Cement shrinks, a big problem the more you use. It's a case of diminishing returns and performance.

750 pounds cement
÷ 196.65 pounds per cubic foot
= 3.81 cubic feet
Batch Volume: 3.81 cubic feet

Pozzolan: I would stay at around 10 percent of the cement weight. You could go as high as 20 percent, but this would severely affect the setting times (longer) without giving you much additional benefit (depending on the pozzolan). As I stated already, you don't need a pozzolan, but you can make denser, stronger concrete when you use one.

75 pounds VCAS
÷ 163.49 pounds per cubic foot
= 0.46 cubic feet
Batch Volume: 0.46 cubic feet

Water: I would want my water-to-cement ratio (pounds of water divided by pounds of cement) to be between 0.30 and 0.34. I know this will give me a mix design with an ultimate strength of 8,000 to 10,000 psi. We will use a superplasticizer to gain fluidity. Use the cement weight plus pozzolan to calculate your water-to-cement ratio.

Total Cementitious Material =
750 + 75 = 825 pounds
825 × 0.32 W/C = 264 pounds of water
264 pounds ÷ 62.4 pounds per
cubic foot of water = 4.2 cubic feet
Batch Volume: 4.2 cubic feet

By the way, water weighs 8.33 pounds per gallon, so:

264 pounds of water
÷ 8.33 pounds per gallon **= 31.7 gallons**

Air: Your mix will contain some air, which has to be factored into your total volume. I would estimate 3 percent based on experience.

3 percent of 27 cubic feet (1 cubic yard)
= 0.81 cubic feet
Batch Volume: 0.81 cubic feet

Sand and Stone: This becomes a balancing act between sand, which provides a fluid, easily consolidated mix with few bug-holes, and stone for strength, appearance and less shrinkage. The higher the sand content, the lower the strength and the higher the shrinkage as a general rule. A 50/50 mix seems to be a good compromise.

Cubic feet so far in our 27-cubic-foot (1 cubic yard) batch:

Cement: 3.81 cubic feet
Pozzolan: 0.46 cubic feet
Water: 4.2 cubic feet
Air: 0.81 cubic feet
Total: 9.28 cubic feet

Stone and sand needed
= 27 cubic feet - 9.28 cubic feet
= 17.72 cubic feet, or
8.86 cubic feet of stone and
8.86 cubic feet of sand

Fluid (Wet-Cast) Mixes vs. Stiff Mixes

by Jeff Girard, P.E.

Are you new to countertops? Are you confused about what the term "wet-cast" means? Here's a look at fluid concrete mixes for wet-casting as compared to stiff mixes for hand-packing, which is also known as "the Buddy Rhodes method."

Stiff Mix

A stiff concrete mix is characterized by its zero-slump, stiff plastic state. The fresh concrete is easy to mold. It typically uses an all-sand mix design.

Pros:

- Almost all styles of concrete are possible: uniform, terrazzo, veined, etc.
- Forms do not need to be watertight. Caulking is not necessary.
- Complex shapes using simple forms are possible.
- Reinforcing steel stays where it is put.
- Ghosting is significantly reduced or eliminated.
- Final product is very natural in appearance.
- Can control surface void shape and size.
- A wide range of stiffness and plasticity is possible.
- Screeding and troweling can be performed soon after casting.
- No bleed water.
- Casting tables do not need to be perfectly level.
- Stiff mix can be placed in thin lifts, and form "buttering" is possible. Face buttering reduces expensive pigment and aggregate costs.

Cons:

- Casting takes longer.
- Achieving fine detail, crisp edges, etc., requires more care and skill.
- Requires a paddle-type mortar/plaster mixer for proper and adequate mixing.
- Cast surface always has some voids and pinholes.
- Improper compaction can result in more voids and weaker concrete.
- All-sand mix requires more cement to achieve good workability.
- Mix consistency is sensitive to superplasticizer and water contents.

We need to multiply the required cubic feet by the pounds-per-cubic-feet weight of sand and of stone.

Stone:
8.86 × 169.7 pounds per cubic foot
= 1,504 pounds

Sand:
8.86 × 163.4 pounds per cubic foot
= 1,448 pounds

Chemical dosages: You will have to play with dosages of chemicals to find out what works for you. Your mix ingredients will react differently to chemicals than mine will. I would start with the manufacturer's recommended dosages and work from there. Remember you are dosing the superplasticizer high enough to maintain your water-to-cement ratio.

Conclusion: Our weights for 1 cubic yard of our sample wet-cast mix design:

Portland cement = 750 pounds
VCAS = 75 pounds
Sand = 1,448 pounds
Stone = 1,505 pounds
Water = 264 pounds
PVA fiber = 4 pounds
Chemicals as needed

You may need to compensate for water in your aggregate. Sand can hold up to 10 percent moisture. Stone can only hold about 2 percent moisture before water freely runs out of it. If your sand is damp and you guessed at 5 percent moisture you would be within a couple of percentage points, which is close enough.

This mix calls for 1,448 pounds of sand. Sand is 5 percent moisture — in this case, 72.4 pounds of moisture. Add 5 percent more sand by weight (72.4 pounds worth), and subtract the water you are weighing in the sand from your water total.

Adjusted sand = 1,448 + 72.4
= 1,520.4 pounds
Adjusted water = 264 - 72.4
= 191.6 pounds

You now have a wet-cast mix utilizing local materials that should cost you about $1.50 per square foot for 1.5-inch-thick countertops.

With a little experimentation, you can create all-sand wet-cast mixes, mixes with just about any aggregate to get any look you want, hand-press mixes, all-glass mixes, self-consolidating mixes, and so on.

www.concretecountertopplant.com

Note: Mark Celebuski will cover GFRC mix design in the next issue of Concrete Decor *magazine.*

Mark Celebuski is the general manager of Pinnacle Cast Concrete, a successful concrete countertop company. He is also an international distributor of concrete countertop manufacturing equipment, and he holds monthly training sessions for professionals at his plant. He has worked in the architectural/structural precast concrete field for the last 30 years, completing more than 15 million square feet of projects. Mark can be reached at (717) 823-7408 or mark@pinnaclecastconcrete.com.

Resources:

Chemicals:

- **www.ball-consulting-ltd.com**
- **www.basf-admixtures.com/EN/Pages/default.aspx**
- **www.concretecountertopsupply.com/store/ccp0-display/Home.html**
- **www.euclidchemical.com**
- **www.fritzpak.com**
- **www.grace.com**

Fiber:

- **www.ball-consulting-ltd.com**
- **www.negamerica.com**
- **www.nycon.com**

Fluid (Wet-Cast) Mix

A fluid concrete mix for wet-casting is characterized by high slump and high fluidity. It typically uses graded aggregates with sizes ranging from sand to gravel. High-slump concrete is very flowable concrete when vibrated. It uses powerful superplasticizers and viscosity stabilizers to achieve large spread with no particle separation.

Pros:

- Casting is quick.
- Little skill is required for casting.
- Mixer may be rotary drum or paddle type.
- Material is easy to level.
- Fine detail is easy to capture.
- Vibrating significantly reduces air voids at the surface.
- It's possible to achieve a very smooth and uniform as-cast finish.
- Reinforcing steel is easily coated and encapsulated.
- Can reduce cement content to maintain slump through careful aggregate grading.

Cons:

- Requires watertight forms. Caulking is necessary.
- Requires level casting tables.
- May require a vibrating table if a zero-pinhole surface is required.
- Potential for bleed water and separation with improper mix.
- Mixture is often sticky and difficult to trowel (once it starts to set up).
- Cannot achieve variegation.
- Higher risk of shadowing or ghosting.
- Reinforcing steel can sink.
- Front-edge returns or 3-D casting requires complex forms.
- The surface must be processed with great care if aggregate is not supposed to be visible.
- Material cannot easily be placed in thin lifts. The high slump prevents buttering. This increases the cost when expensive pigments and aggregates are used.

Jeff Girard is founder and president of The Concrete Countertop Institute. He can be reached at jeffg@concretecountertopinstitute.com.

Choosing the Right Countertop Grinder

Photo courtesy of Patina Concrete

Photo courtesy of Buddy Rhodes Studio

Buddy Rhodes, of Buddy Rhodes Studio, using a single-head hand grinder.

by Natasha Chilingerian

Every concrete countertop fabricator is after a smooth, clean finish on his or her work, be it a kitchen island, fireplace mantle or sink basin. Achieving a flat, shiny surface often comes down to the type of grinder that's used, and with so many machines on the market, many fabricators can feel overwhelmed by the choices.

Grinders vs. Polishers

First, there are machines that grind and machines that polish. The two are different — machines designed exclusively for polishing are smaller and lighter than grinders.

"Grinders are heavy, can take more abuse, and are for aggressive stock removal," says Jeff Girard, president of The Concrete Countertop Institute. "The 400- to 3,000-grit stage is what I call polishing, which will build a sheen. You're not removing any concrete."

Experts also note that a machine's output is determined more by the grit of the pad used than by the machine itself, and the higher the grit, the closer one gets to polishing, regardless of what machine you use.

That said, you now know a grinder is what you're looking for, not a polisher. Now what?

Electric vs. Pneumatic

Countertop grinder shoppers must decide whether to choose a machine that's powered by a cord plugged into an electrical outlet or one that's motorized by air.

The consensus among experts is that pneumatic machines (into which air is blasted through a hose that's attached to an air compressor) are the way to go, as the tools are lighter and carry no risk of electrocution.

Another negative aspect of electric tools is their weight — they're generally more cumbersome than air-powered tools. While pneumatic grinders require an additional initial investment of roughly $1,000 to $3,000 for an air compressor, experts say the tools themselves don't cost more than electric tools do, and they weigh much less (as little as 2 pounds).

But there is a downside to air-powered machines as well: An air compressor can be a costly investment, and they limit fabricators to working solely out of their shops. Since electric grinders can be used anywhere an outlet is found, they provide fabricators with more mobility, allowing them to grind and polish in clients' buildings, for example.

How can fabricators decide what's best? Colin Sparkman, a partner at Patina Concrete in Modesto, Calif., says the way your shop is set up, as well as the amount of work you do and where you do it, can be good indicators.

"We have a lot of outlets in our shop and a small staff, so electric works for us," Sparkman says. "If you're a huge shop with a large amount of production, you might go with air-powered."

Girard concurs. "You have to ask yourself what you're trying to do. Are you going to the job site? Then you need to go electric. Are you doing all of your work from an existing shop? Then I recommend going pneumatic."

As electric grinders carry the risk of electric shock when used wet, experts recommend using an electric grinder that's double-insulated and has a built-in ground fault interrupter.

Photo courtesy of Patina Concrete

This concrete tabletop was completed by Patina Concrete workers using a DS301 planetary polisher, a Chicago four-inch electric angle grinder and a four-inch variable speed wet/dry polisher by Metabo, as well as diamond hand-polishing pads.

Wet vs. Dry

The next question fabricators must ask themselves when choosing a grinder is whether they want to go wet or dry. Experts say the majority of countertop grinding and polishing is done wet, but that most fabricators will end up doing some dry grinding as well.

New Grinders Offer More Choices

One of the biggest innovations in the concrete countertop grinding and polishing industry has been planetary technology — machines that have multiple grinding heads, allowing fabricators to cover a large radius of material at a time and achieve an extra-flat result. Two big-name grinding tool brands recently released new models that incorporate planetary technology, giving fabricators more options: They are the Legend CT planetary countertop machine from Samich USA, and the DS3011 Planetary Polisher from Leitch/Intertool, which is a new and improved version of the company's DS301.

The Legend CT holds three 5.5-inch heads, and according to Samich USA president and CEO Josh Huseby, its balance is what makes it unique. "The motor and gear box, which is the heaviest part, is positioned in the middle, which provides even weight distribution," Huseby says. "It has a high level of stability, and it won't float to one side." It also covers a larger-than-average diameter of 13 inches, and at 50 pounds, workers won't have to apply a lot of pressure while using it, Huseby says.

The second machine, Leitch/Intertool's DS3011, possesses all the beneficial qualities of the original DS301 model (a three-head planetary tool designed to grind, polish or clean countertops, floors, walls and steps made of concrete, terrazzo, granite and marble), but takes on a few enhancements that make it cleaner, more powerful and easier to maintain. The new model has triple-sealed bearings, which protect the tool and allow users to simply rinse the machine and allow it to dry as a maintenance routine. Higher torque is achieved via a small pinion gear that drives a larger spur gear, and a built-in vacuum picks up dust when the machine is used dry (it's typically operated wet with a slurry skirt). Plus, repositioned brushes and the presence of cool airflow minimize dust damage to the brushes, allowing them to last longer.

A third new tool, the Scarab 5 Head Hand Grinder, contains five three-inch tooling heads that spin in opposite directions, but don't call it a planetary machine. WerkMaster president Brian Wilson describes it instead as an extremely versatile hand grinder that can be used wet or dry and even vertically on walls. Unlike the typical planetary grinder, it fits the bill quite nicely on edges and narrow sections of concrete.

"I call it a hand grinder (instead of a planetary grinder) because it's used as a hand grinder," Wilson says. "In this industry, the big challenge is edging. That challenge had to be met with a machine that can do edging, stairs and hard-to-get-to places, which this one does." The machine also comes with a detachable handle, allowing workers to use it on the floor while standing, and it's shaped to reach awkward spots such as behind toilets, along bathtub ledges and around machinery. It's also designed to rest flat on surfaces and comes with a removable dust shroud to minimize dust and debris while used dry.

- **www.leitchco.com**
- **www.samich-usa.com**
- **www.werkmaster.com**

Buddy Rhodes makes GFRC easy. The best mix recipe now in a spray formula. Get the mix that sticks.

To order phone 877-706-5303

Visit buddyrhodes.com for the complete GFRC line and training.

BUDDY RHODES CONCRETE PRODUCTS

When grinders are used wet, water is fed through the machine and exits the center of the grinding disk(s), which preserves the life of the diamond pads used with the machine and allows workers to grind dust-free. And since they operate at high rpm, wet grinders can remove material about three to 10 times faster than dry grinders can, Girard says.

Also, all experts agree high-quality surfaces are easier to achieve with water. "You'll get a cleaner polish," says Buddy Rhodes, of Buddy Rhodes Studio in San Francisco. "It depends on what kind of a finish you're going for."

However, grinding with water produces slurry, which can create a big mess in the shop, and the presence of water on the concrete surface can mean slightly poor visibility. "The downside of wet grinding is that you'll need enough space to handle the water, and you have to do something with the water — you can't just flush it down the drain," Girard says.

Dry grinding — while it produces dust — is a cleaner process and can be done on job sites. When selecting a dry

grinder, choose one with an effective vacuum system to minimize dust, experts say, and keep in mind that without water, the machine's diamond pads will wear more quickly.

Planetary vs. Single-Head

The third question fabricators may ask while building their grinding toolset is, do I need a planetary machine?

Planetary grinding/polishing machines contain multiple heads that cover a diameter of about 12 inches and spin clockwise and counterclockwise. They require minimal skill to operate and result in a super-flat finish. "With heads that spin in opposite directions, you'll get a better polish and it won't leave marks, and the operator of a planetary machine will experience less fatigue," says Tom Fischer, president of Fishstone in Elgin, Ill.

While planetary tools are very useful on large spaces, such as floors, wide countertops and kitchen islands, they can't be used on edges or narrow, oddly shaped areas like fireplace mantles, sinks and toilets. So fabricators should view a planetary tool as a supplementary investment, as they'll still need to buy a single-head hand grinder.

Experts say if you're working on large pieces of concrete on a regular basis, a planetary tool can be worth the cost.

"They're pretty good if you have a large space to cover, but they're costly and make a lot of noise," Rhodes says. "If you'll use it professionally on a day-to-day basis, it's good to have in your toolbox. They give you a smooth, flat surface."

Other Considerations

What else should fabricators think about on their quest for the most suitable grinding tools? For one, weight and comfort — if you'll be using a machine every day, one that's easy to maneuver and on the lighter side might be best. "When you're looking at them, think about the way the tool feels when you pick it up," Sparkman says.

While you can't know exactly how well a tool will perform until it's used, reputation can be a good indicator. "Go with the ones that are tried and true," says Steve Kisling of Patina Concrete.

And experts agree that buyers get what they pay for. Cheaper models exist, but they're more likely to break down and be less comfortable to use.

If grinding and polishing work on curved, hard-to-reach spaces such as sinks and toilet bowls is a regular part of a fabricator's routine, a grinder that holds a small pad (about 3 inches) and comes with a detachable extension device can come in handy. Diamond hand-polishing pads are also useful on these types of surfaces and on any area that could use a quick touch-up. "(Hand-polishing pads) are essential," Girard says. "At about $80 a pack, they're a no-brainer."

www.buddyrhodes.com
www.concretecountertopinstitute.com
www.concretecountertopsupply.com

2010 Concrete Countertop Design Competition

See more photos of the winners and read their stories, plus check out some of the runners-up, at ConcreteDecor.net.

Winner, Commercial

ConcretePete LLC

Reception desk at indoor climbing gym, Boulder, Colo.

Winner, Residential

Architectural Concrete Interiors

Grace/Stuckey residence, Scottsdale, Ariz.

Thanks to our sponsors

SP Systems, LLC

Engrave-A-Crete

FISHSTONE

Engineered Concrete Performance BUTTERFIELD COLOR Decorative Concrete Products

enCOUNTER professional countertop system

Expressions-LTD

CCI

CRETE MOLDS

Burgess OPTIPOZZ Highly Reactive Metakaolin

BLUEconcrete.com PIGMENTS, AGGREGATES, ADMIXTURES

The Latest UV Sealing Technology

EAP Sealer

Product Training

519

SURFACE

Sealers and Specialty Coatings, Colorants, Training, Cleaners and Mixes

800.475.1975

www.surface519.com


MANUFACTURER OF DECORATIVE CONCRETE DESIGN SYSTEMS
SUPERSTONE
• ChlorStain® • Super Surface® • Super Tex® • SuperTex Wet & Ready® • Super Veneer Microtopping • Integral Colors •
• Crack Repair Kits • Color Hardener • Epoxy Coatings • Bubble Gum Liquid Release® • Countertop Epoxy • Release Powder •
• Sealers • Stamp Tool Patterns • Overlayment Systems • Super Hydro Tone Stain • Seamless Epoxy System • Training Seminars •
Made in the USA
305-681-3561 • WWW.SUPERSTONE.COM • 800-456-3561