THE ROYAL FAMILY OF KINGDOM DECORATIVE CONCRETE PRODUCTS

IMPERIAL CONCRETE COUNTERTOP MIX

WET-CAST COUNTERTOP MIX
TECHNICAL DATA & APPLICATION INSTRUCTION

PRODUCT DESCRIPTION

Kingdom Products' Imperial Concrete Countertop Mix is engineered to be exceptionally strong and formulated to produce high quality commercial grade countertops with minimal shrinkage and resists cracking and curling when proper procedures are followed. The combination of finely graded sands & premium graded, select decorative aggregates, combine to make the perfect mix needed to create professional cast-in-place or pre-cast countertops. This mix is suitable for hand troweled, ground & polished or hand pressed finishes.

BENEFITS

- No Cracking
- No Curling
- No Shrinking
- Precast
- Cast-in-Place
- Single Component
- Interior/Exterior
- Exceptionally Strong
- Can be Stained, Dyed, Integrally Colored
- Grind to Expose Decorative Aggregate in the Mix

RECOMMENDED APPLICATIONS

- Hand Trowel
- Grind
- Polish
- Hand Press
- Exposed Aggregate
- Countertops
- Tables
- Furniture
- Wall Caps
- Step Treads
- Terrazzo look

TECHNICAL INFORMATION

Working Time…… 2 - 3 hours
Full Cure (@ 2") …… approximately 7 days
Wet Appearance…… Light to Dark Gray
Compressive Strength (3 days)…… 7,500 psi
Drying Time …… dependent upon conditions
Application Temp …… 50°F to 85°F
Dry Appearance …… White, Light Gray or Charcoal
Compressive Strength (7 days) …… 10,000 psi

***Air temperature, concrete temperature and/or relative humidity will all affect drying times. Follow recommended coverage rates for best results.*

APPROXIMATE COVERAGE RATES

Varies by thickness*****

On average each 60 lb bag will cover approximately
- 3.5 sq ft at 1.5" thick
- 2.75 sq ft at 2" thick

PACKAGING

Imperial Concrete Countertop Mix is packaged in a 60 lb bag and is available in three standard colors: White, Gray & Charcoal. Custom colors are available upon request.

SHELF LIFE

Imperial Concrete Countertop Mix has a shelf life of up to one year, from the date of manufacture as long as containers remain unopened and stored under the proper conditions, in an environment free of moisture, direct sunlight, excessive heat and freezing temperatures. To extend shelf life, transfer any leftover material to a plastic pail.

STORAGE

Do not subject **Imperial Concrete Countertop Mix** to moisture prior to use. Keep product in a cool dry location, free from direct sunlight. In cold climates, store the product at room temperatures and bring product to a temperature range of 60°F to 80°F prior to use. Colder material may take longer to achieve final set time, while hot material may set very quickly. Keep material in a tightly sealed container. Avoid storing directly on top of a concrete slab. Place a barrier between the bags and the concrete floor (i.e. plastic, pallet, etc).

PREPARATION/REINFORCEMENT Support forms in such a way that they may remain undisturbed for 12-24 hours after pouring. Prepare molds, forms and any knockouts with a light coating of a form release agent. Do not use liquid release agents intended for stamping, as they will likely evaporate before the forms can be removed. If pouring over an absorbent base material like wood or press board, place a piece of plastic sheeting over the base material before pouring. This will keep the base material from absorbing moisture from the mix. Place 4 x 4 x 6 gauge mesh, ladder wire or truss type welded wire for reinforcement. Apply reinforcement at all re-entrant corners at a 45° angle. Reinforcement should be placed in the middle to lower 2/3" depth of the piece. Arrange the wire in a grid pattern and tie together. Avoid anchoring the reinforcement to the support framework beneath.

MIXING A rotary style or drum mixer will be needed as this mix is quite dry. The use of a hand/drill mixer will either result in a broken drill or overwatered mix. **DO NOT Overwater!** Use a total of 80 to 90 ounces of clean water to one 60 lb bag of Imperial Countertop Mix. Overwatering will promote curling, cracking & crazing and will affect the water to cement ratio which will decrease the strength of the piece. If you are using a water reducer or self-compacting additive, reduce the water demand accordingly.

To prevent the mixing vessel from absorbing your mix water, first fully wet the drum or mixing vessel and then dump out any excess water. Then start with about 80% of the total mix water, add it to the mixer drum and slowly add the dry powder mix into the liquid. Allow the mix to absorb the water slowly while the mixer is turning. This will help prevent the mix from balling up. Mix for 3 to 5 minutes or until the mixing process is complete. During this time, stop the mixer and scrape any dry powder from the mixer walls back into the mix. At this point, you may add the remaining 20% of the water if necessary, but Do Not add more water than recommended. Continue with the mixing process until a uniform blend is achieved.

APPLICATION Pour/Place mix into prepared forms, starting at the outside edges, vibrating as you go making sure to consolidating material around mold inclusions to help eliminate pinholes. Fill the form to full depth at one end, then work toward the other end. Place the material quickly & continuously. Once the mold is filled, use a straight edge or screed to smooth the surface. Use a magnesium darby or mag float to float the surface, leveling any ridges and filling any voids. Once the concrete achieves a thumbprint hardness, continue to finish it as desired (i.e. stamp/texture, hard trowel) The set time will be determined by physical temperature of the substrate, the temperature of the mix water, the temperature of the bagged, dry material itself and the overall atmospheric conditions at the time of pour. Do Not leave the piece unattended while achieving final set (approx. 4 hours) Trowel as necessary until desired finish is reached. When possible, keep atmospheric conditions consistent throughout the curing process. Cover the piece with polyethylene to hold in moisture and allow for a slower curing time. Tent the poly away from the surface to avoid discoloration in the finished product.

SEALING & POLISHING

Kingdom Products recommends film forming coatings for maximum stain and abrasion resistance. Acrylic sealers, epoxies, polyaspartics, polyurethanes and lithium densifiers are all suitable for use with Imperial Countertop Mix, depending upon the final usage of the piece.

If polishing, the process may begin in 2 - 7 days depending on the degree of set of the piece. For an exposed aggregate or a terrazzo look, start at the 50 grit stage & grind the surface until the decorative stone is exposed to desired degree. Work your way up through the scale of polishing discs in sequence from 50 grit to 100 to 200 to 400 and so on up the scale up to 3000 grit & buff. Keeping the sequence of jumps tight (not skipping a grit size during the polishing steps) will produce a nicer final product. Wide ranges of jumps between grit sizes in will increase pad wear and may minimize the polished effect in the final product. For best results, polish in conjunction with *Kingdom Products' Lithium 100 and Aqualon Nano-Guard*.

PRECAUTIONS AND LIMITATIONS

- Do not over water this product!
- When using any white, cementitious material, be sure to use the proper tools to avoid discoloration.
- **Imperial Concrete Countertop Mix** needs a properly prepared substrate.
- Avoid using in temperatures below 50°F or above 85°F .
- Protect from freezing for 48 hours after application.
- The supervision of use and the proper application of this product, are all the sole resposibility of the end user.

SPECIAL NOTES

Always test prior to use for owner approval of color, texture, finish and any other critical requirements prior to proceeding with the installation. Please consult Safety Data Sheet (SDS) and read the Technical Data Sheet (TDS) and our Warranty information, in full, prior to use. Verify that the most current versions of all documents are being referenced. **For Professional Use Only**!