

Application Instructions for Keystone Kool Deck on Existing Concrete



REQUIRED MATERIALS

- Keystone Kool Deck®
- PTA Bonding Agent
- Water
- 20 Mesh Marble Sand
- White Portland Cement

NECESSARY TOOLS

- Paddle Type Concrete Mixer
- Mortex Dash Brush
- Clean, 5 gallon Bucket
- 1 Gallon container (for measuring water)
- Steel Finishing trowels
- Mortex Viscosity Cup
- Nylon Bristle Broom
- Concrete finishing tools
- Drill with mixing blade
- Pressure washer

OPTIONAL TOOLS

- Mortex Pattern Blade



COVERAGE

1 unit of Keystone Kool Deck will cover approximately 300 ft².

1 carton of PTA will cover approx. 350 ft².

Keystone Kool Deck® can easily be applied to concrete on the very first day of the concrete pour (fresh concrete) or to existing concrete the next day after a pour and beyond as described here.

IMPORTANT:

Mortex Manufacturing highly recommends a trained crew of 4 – 5 people apply Keystone Kool Deck.

BASIC STEPS

1. Remove any existing toppings or foreign matter from the deck.
2. Wash the deck with a water & muratic acid solution followed by a high pressure wash.
3. Apply PTA Bonding Agent.
4. Apply Keystone Kool Deck material.
5. Trowel.
6. Cover with plastic for two days.
7. Remove plastic and clean up site.
8. Enjoy.

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DETAILED INSTRUCTIONS

SAFETY: Proper safety considerations should be followed during the application of Mortex products and any product should be used in accordance with the SDS (afety Data Sheet) and all recommendations followed.

TEMPERATURE CONSIDERATIONS: For best results, ambient temperature during the application **should be 50 degrees and rising and should not be over 90 degrees.**

NOTE: In warm climates, extreme care should be taken if installation is to take place when temperatures are expected to exceed 95°F (35°C.) This is due to the necessity of the topping to cure after application. In freeze-thaw climates, the finished application should be protected against frost and other severe conditions, for a period of 28 days.

If rain, frost or snow is predicted then.....do not apply the products.

CLEAN AND PREPARE CONCRETE

Preparation of the concrete surface is one of the most important factors in the successful use of the PTA Bonding Agent followed by the application of a Kool Deck surface (PTA System). The performances of our products are directly related to how well the surface has been prepared.

The PTA System will only adhere to solid concrete surfaces. Mortex does not recommend that our topping be applied to brick, wood, tile, natural stone, clay or any other surface that is not cementitious as proper adhesion will not occur.

The PTA System will also not adhere to any concrete substrate that is not completely free of dirt, grime, oil, wax, grease, paints, stains, loose toppings, deteriorated concrete, curing compounds or any other foreign matter.

Note: When evaluating the amount of deck preparation work necessary and the question comes up of whether or not you have done enough, the answer is "The More You Do, The Better the Job."

SURFACE PREPARATION

1. Application of PTA System should only be to clean, sound concrete surfaces that are preferably 28 days old.
2. Mask off all areas that are not being coated to protect them from damage. Mask exposed aluminum surfaces and all areas that you wish to protect from over splash. (Cement will corrode and blacken aluminum.) Cover joints and drains with protective tape.
3. Remove deteriorated concrete or other toppings using a scarifier first, then a power washer to remove debris. A 3000 psi pressure washer can be used to remove any paints, plastic coatings, adhesives or polymer toppings.
4. Repair any major cracks or deteriorated areas in the concrete well in advance. Any major repairs of structural damage in the deck or cracks should be done well in advance of the PTA and topping application. Any minor repairs such as damaged edges and/or depressions and holes should be made just ahead of surface application.
5. Wet the deck with water in preparation of the muratic acid wash. All concrete (even 1 day old fresh concrete) must be acid washed with a solution omuriatic acid to etch the surface. Never put acid on dry concrete.
6. Mix and apply muratic acid solution: For older concrete, use an acid solution: 1 part acid to 1 part water. For new concrete, use a 1 part acid to 4 parts water. It is NOT necessary to neutralize the acid with products such as Trisodium phosphate (TSP). It is important to understand that neutralizers like TSP will leave a film on the deck and will break the bond between the concrete deck and the deck topping.
7. Use a nylon bristle broom to scrub the surface.

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NOTE: When the acid is applied, if the acid does not boil and bubble then there is still something on the deck.

8. After one person starts applying the acid mixture and scrubbing the deck another person should follow them using a 3000 psi pressure washer with the nozzle 3-4 inches off the deck to wash the acid off.
9. After the acid is washed off the deck, an additional pressure wash should be given. This time hold the pressure washer nozzle 1 foot from the deck surface.

REMEMBER: Do not neutralize the deck with neutralizers such as TSP as the Kool Deck material will not bond to them.

10. Before the application of the PTA Bonding Agent the deck must be kept wet for a period of at least one (1) hour prior to using PTA.
11. Minor repairs such as damaged edges and/or depressions and holes, should be made at this time. Repair should be damp but without standing water. Brush PTA only into the area to be repaired. Using a rubber float as an applicator, pack holes and depressions with the topping mixture in a thick enough consistency to avoid craze cracking.

MIX & COAT THE SURFACE WITH THE PTA BONDING AGENT

REMEMBER: Before the application of the PTA Bonding Agent the deck must be kept wet for a period of at least one (1) hour prior to using PTA.

Mixing Formula – Follow carefully
1 Carton of PTA
1.3 Gallons (5 L) water



1. Place 0.5 gallon (2 L) of water in a 5 gallon bucket and add PTA; mix for two minutes with a drill and a rectangular mixing blade. Let mixture rest for three minutes.
2. Add remaining 0.8 gallon (3 L) of water and blend for three additional minutes until proper consistency is obtained.
3. When mixed with water, PTA should have the consistency of milk. Additional water can be added to maintain consistency.

APPLICATION OF PTA INSTRUCTIONS

1. Pour PTA onto deck and use a broom to scrub PTA onto the entire surface (including the repaired areas). Be sure to cover surface completely.

VERY IMPORTANT: DO NOT ALLOW PTA TO DRY BEFORE THE KOOL DECK MATERIAL IS APPLIED.

2. Brush away all excess PTA. Base concrete should be visible through the PTA (thin coat is best).

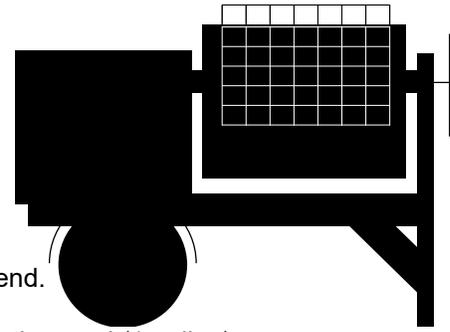
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MIXING KEYSTONE KOOL DECK (Follow Carefully)

The Formula:

- 1 Unit Keystone Kool Deck
- 1 Bag White Cement (94 lbs.)
- 10 Gallons size 20 mesh marble sand
- 8 Gallons water



IMPORTANT: A paddle type mixer is necessary for a thorough, uniform blend.

1. Deposit the marble sand into mixer; add just enough water to dampen the sand (1 gallon).
2. Add one Kool Deck unit. Allow this to mix for at least two minutes.
3. Add water (4 gallons) and white cement simultaneously. Allow this stiff paste to turn for three minutes.
4. Add additional water (3 gallons) until the mixture is of a "milky" consistency. If necessary, slightly more water should be added to achieve a thin, milky mixture. Use a viscosity cup to help obtain proper consistency.

SPLASHING THE KEYSTONE KOOL DECK MIXTURE

1. Pour the mix from the mixer into a five gallon bucket.
2. Begin applying. Dip the dash brush into the mix covering the full length of the bristles and start splashing the mixture. If necessary, additional water should be added to the Keystone Kool Deck mixture so the material will rain from the brush and have a creamy appearance when splashed.



The best texture is achieved by raising the brush high and moving the hand forward, snapping back with the wrist. This motion causes the mix to rain from the brush and gives an even, uniform texture.

3. Splash on the mixture in even, straight, side by side rows, being sure to overlap so as not to leave any holidays.
4. Resplash the deck just before the first application has lost its water glaze. When applying a light second splash, allow the Kool Deck Elite mixture to rain down from the Dash Brush. The second splashing will drive the Kool Deck Elite surface into high peaks for good texture. The high texture produced by the second splash is necessary to allow troweling time and to give a better pattern. Final material should be 1/8" total thickness.

Note: Keystone Kool Deck cannot be applied with hopper gun. The material will clog the hopper. A normal hopper will separate the sand and cement and the Kool Deck material will not adhere properly.

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TROWELING THE KEYSTONE KOOL DECK® SURFACE

1. Begin to trowel as the water glaze leaves the deck. The pattern is set with the first trowel pass. The trowel must be held perfectly flat with a light hand. (The ideal tool is a Mortex Pattern Blade or a worn, cupped trowel)
2. The second troweling must follow immediately behind the first. With the trowel held flat, feel for uneven surface, leveling it as you go.
3. A last pass may be necessary to bring the deck into a uniformly dense and color-fast deck surface. The finished deck should reveal approximately a 40% smooth and a 60% void surface. This prevents craze cracking since the knolls may expand and contract from the voids.

CURE WITH PLASTIC

VERY IMPORTANT: Immediately after final troweling, cover area with Visqueen (aka Polyethylene Plastic) 2 mil. clear in color and leave covered for precisely two (2) days. Cover the areas immediately with plastic after troweling. Do not wait until you have completed the entire job before covering with plastic. Weight the plastic down with sand so that air cannot circulate under the plastic and dry out the deck. Do not leave covered for more than two (2) days. If the deck surface exhibits white growths when the plastic is removed, wash the surface with water immediately. Use a stiff bristle nylon brush to scrub the surface. During the next 28 days, the deck surface should be washed frequently.

COMPLETION OF WORK

Remove tape masking from surrounds, joints and drains, clean up around the job site and you are finished.

AFTER INSTALLATION

Kool Deck® surfaces need sufficient time to cure. The owner should avoid contact with the deck for 48 hours, light walking traffic after 3 days; normal walking traffic after 14 days; heavy patio furniture after 28 days.

POINTS TO REMEMBER

- Do not allow the PTA Bonding Agent to dry before applying the Keystone Kool Deck mixture.
- After troweling the Kool Deck material, cover the areas with plastic immediately and leave covered for exactly 2 days. Cover areas as you move along. Do not wait until the end of the job to cover the Kool Deck.
- Make sure the Keystone Kool Deck mixture is thin enough. A mixture that is too thick will result in low square foot coverage, poor finished pattern, an accelerated setting time, and more craze cracking. The Kool Deck surface should be 1/8" thick.
- Splash twice. The first splashing should be used to cover the deck. The second splashing will drive the Kool Deck surface into high peaks for good texture.

IN CASE OF RAIN OR OTHER UNFORESEEN DIFFICULTIES Should it be necessary to cover the deck with plastic, be sure the plastic is removed as soon as possible. Failure to do so may result in a whitish film on the deck surface.

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