

# Micro-Topping EXT

INNOTECH MICRO-TOPPING EXT is a flexible, breathable topping created specifically for outdoor and high-traffic interior applications. This product is available in gray and white, base and finish coats, and will utilize INNOTECH MICRO-TOPPING Liquid Tint Pack system for colored applications. This product is the preferred material for trowel-down/spray textures in exterior/interior applications.

INNOTECH MICRO-TOPPING EXT is a combination of liquid polymer, color tint packs and specially formulated powder mixture. The material is applied in multiple coats by brush, roller, squeegee, trowel or hopper-gun to a typical thickness of 90-mils. It can be applied over almost any clean, sound surface including concrete, cement block, tile, metal, and wood. INNOTECH MICRO-TOPPING EXT Liquid is added to both the Base and Finish Coats to achieve the desired material consistency.

Exterior Applications: INNOTECH recommends two base coat applications as a minimum coverage guideline.

Interior Applications: INNOTECH recommends two base coat applications and one finish coat application as a minimum coverage guideline.

**IMPORTANT:** Please reference the section "Available Packaging and Coverage Information" in this document for details.

## Product Features and Benefits

### INNOTECH MICRO-TOPPING EXT...

- Is a flexible but extremely durable, breathable cementitious topping applied by trowel, squeegee or hopper-gun to beautify and restore exterior and interior concrete surfaces.
- Has extraordinary adhesion and great ability to withstand prolonged pedestrian and vehicular traffic.
- Provides a tough water-retardant coating that substantially reduces water penetration, freeze-thaw scaling and concrete carbonation.
- Is a "breathable" coating that releases normal entrapped vapor without loosening or blistering.
- Is available in two base colors – white and natural gray cement.
- Can be ordered with tint packs in 42 standard colors (see the INNOTECH COLOR HARDENER color chart for selections).
- Is applied at a thickness of only 90 mils (3/32" or 2.38 mm) and can be feathered to a zero edge.
- Can be used with INNOTECH CHEMICAL STAIN+ and INNOTECH LIQUID DYE CONCENTRATE+.

**Important:** Utilize a crack repair system for all cracks and construction joints.

## Prior to Application

### REQUIRED EQUIPMENT:

1. Heavy Duty 1/2" Drill and "Jiffy" Mixing Blade
  2. Mixing Containers
  3. INNOTECH CON-CLEAN+
  4. Power Washer (2,500 psi)
  5. Crack router or Grinder with Masonry Cutting Blade
  6. Caulking Guns and Polyurethane sealant (sika flex 1-a or equal) rectangular or pool steel trowel, stand-up trowel or squeegee, texture or hopper gun, or mortex-type dash brush
  7. Brushes and rollers (1/2" and 3/16" nap)
  8. Spiked shoes
  9. Brooms, air Blowers
  10. Duct tape and Masking Paper
- INNOTECH utilizes the International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) standards for specifying finished surface roughness prior to applying INNOTECH MICRO-TOPPING EXT. For proper adhesion, the concrete must be a minimum #2 according to the ICRI CSP chart. Contact the ICRI at [www.ICRI.org](http://www.ICRI.org) or INNOTECH for detailed information on surface profiles.
  - Remove all loose decking material, paint or other coatings. Remove all spalled concrete. In particular, be sure to remove all grease, oil, silicone coatings, or any other material on concrete that would prevent adhesion. Generally, concrete is to be etched with a 20:1 solution of INNOTECH CON-CLEAN+ and water remove alkali deposits or loose particles on the surface. Thoroughly neutralize the acid by pressure washing with detergent solution, such as dilute INNOTECH CONCRETE DEGREASER & NEUTRALIZER+ at 2.5-cups to (1) 5-gallon pail of water. Grinding, shotblasting or power scarifying are also acceptable methods. **CAUTION:** Remove acid residue in accordance with safe-handling practice and in compliance with general regulations. Fill major depressions or cavities in concrete or deck coating with an appropriate repair mortar.
  - Provide proper drainage by ensuring the deck and all repairs fall within a 1/8-inch per linear foot minimum.
  - Concrete decks should have a control joint system worked out to meet all known deck-stress concentration points. A good quality polyurethane sealant (such as sika 1-A or an equivalent) can be used to fill expansion joints, generally after application of the coating. Install backer rod in deep joints to prevent 3-sided adhesion of the sealant. Joint design should accommodate the movement expected. Generally, the depth of the joint should be no more than 1/2 the width. Priming of side walls of the joint with an epoxy primer is highly recommended.
  - Control joints and moving/working cracks in the existing concrete are expected to transfer through the surface of the topping and create potential cracking problems. Isolate moving cracks by using a crack repair system according to the kit instructions. In the case of existing joints or saw cuts, new joints or saw cuts must be placed in the INNOTECH MICRO-TOPPING EXT directly over the existing joints or saw cuts. Any new joint or saw cut must penetrate entirely through the new INNOTECH MICRO-TOPPING EXT layers.

## Product Application

### Proper mixing of INNOTECH MICRO-TOPPING EXT is absolutely essential to material function.

- Open the INNOTECH MICRO-TOPPING EXT container and pour off about half of the liquid into another clean five-gallon container. With a flat stick, stir the bottom of the original container to bring up any solid residue that may have settled on the bottom of the original pail. Then "box" the liquid back and forth a couple of times with the other part of the pail.
- Optional color – to achieve the desired architectural color, add one INNOTECH MICRO-TOPPING EXT Liquid Tint Pack to each 5-gallon container of liquid and mix thoroughly prior to adding the powder component to the liquid.
- To make a full "unit" of INNOTECH MICRO-TOPPING EXT, pour five-gallons of stirred and boxed liquid into a large mixing container. Start mixing with an electric drill mounting a "Jiffy" impeller-type mixing blade, or equal. Then gradually add about two bags of INNOTECH MICRO-TOPPING EXT Base Coat into the mixing container. Never reverse the procedure and attempt to pour the liquid into the powder. **NOTE:** See "Application Steps" below for exact mix ratios for each coat.
- After the material has been mixed free of any obvious lumps, continue to mix for at least two more minutes with the "Jiffy" blade submerged in the mix and held at an angle. The mix gradually loses its grainy look and develops a creamy appearance. The two minutes of final mixing is essential to eliminate dry pockets of unmixed material that could produce pinholes and white efflorescing in the finished work.
- Apply INNOTECH MICRO-TOPPING EXT immediately upon completion of mixing. Working time of material at 70 °F (21 °C - 24 °C) is about 30 minutes. Mix no more material than can be applied in that time. Discard any material that starts to set up in the mixing container. Do not attempt to re-temper material. Keep material stirred to avoid aggregate settling in container during use.

### STEP ONE – BOND COAT (A bond coat is applied to prime and condition the surface)

- Slightly dampen any concrete and masonry surfaces with water before applying the bond coat. The recommended method for dampening is with a water hose spray nozzle or a hand-held pump garden sprayer. Do not dampen to a point where surfaces are shiny wet—only damp. Nonporous surfaces such as metal and tile do not require dampening.
- For a bond coat application mix together the following:
  1. INNOTECH MICRO-TOPPING EXT Liquid 5-gallons
  2. INNOTECH MICRO-TOPPING EXT base coat 1-1/2 bags
 Blend these materials together thoroughly by "Jiffy"-mixer drill mixing. Apply the bond coat material immediately upon completion of mixing. Keep material stirred to avoid aggregate settling in container during use.
- Trowel or squeegee the bondcoat over the concrete for best results. Be sure to work the material into porous concrete surfaces. To produce a smoother, flatter surface on concrete that has surface irregularities, pits, and voids, trowelling is recommended. On large areas, it is recommended to squeegee the bond coat material for fastest production. Use an inexpensive brush to apply bond coat material in corners and cove the material up at walls. The above mix of bond coat should cover about 500 sq. ft. Cure time for the bond coat is 2-4 hours, or until no material comes up when you press your foot down on the deck and swivel it under weight.
- An additional coat of bond coat material may be required to grout or smooth out the surface for certain texture finishes. For a grout coat application mix together the following:
  1. INNOTECH MICRO-TOPPING EXT Liquid 5-gallons
  2. INNOTECH MICRO-TOPPING EXT base coat 1-1/4 bags

Scrape-trowel the grout material to fill all voids or pinholes in reinforcing fabric and to smooth or level-up surface as required. A flexible tool such as a plastic Bondo spreader is very effective for smoothing out material at wall coves. *Approximate coverage is 600 sq.ft. per mix.*

### STEP TWO – TEXTURE COAT (The texture coat is designed to provide a uniform, slip-resistant, decorative finish where desired.)

A variety of functional or decorative texture finishes may be applied. The most common textures applied around pool decks are as follows:

**Knockdown Finish** – To produce a contemporary, decorative Monterey or travertine finish, the mix ratio is:

1. INNOTECH MICRO-TOPPING EXT Liquid 5-gallons
2. INNOTECH MICRO-TOPPING EXT base coat 2-1/4 bags

When using this finishing technique, it is important to keep the viscosity of the material consistent from one batch to the next. The ideal material viscosity or consistency for a knockdown finish is similar to thick pancake batter. An easy way to judge material viscosity is to run your finger across the surface of the material in the mixing pail; the material should be stiff enough to leave a rut behind your finger. This rut should close in behind your finger at the same rate on each mix. Adjust the orifice on the "Pattern Pistol" to the desired size. Generally, the largest or second to the largest orifice or hole setting is used and the material is sprayed to a 70% - 75% coverage at 10-15 psi. Spray the material in even, overlapping passes, and hold the trigger on the gun open as much as possible to avoid drips and stop and start patterns. The same applicator should do all the spraying to achieve the most uniform spray pattern.

Walk through the wet material on spiked shoes (golf shoes work well) and lightly "knock-down" the material with the trowel. The material should be allowed to set until it loses its wet-glaze. INNOTECH MICRO-TOPPING EXT will generally set to a trowelable hardness in about ten minutes, depending on temperature and humidity. Care must be taken to knockdown each batch of material at the same stage of set or hardness to maintain uniform size paddies or flat-troweled texture splatters. Knockdown the material in as few passes as possible; do not over work the material. To achieve the most professional looking finish, it is recommended that all

the material be knocked-down in the same way and in the same direction, by the same applicator. A foolproof way to apply a professional looking knockdown finish is to spray a texture coat to 90% coverage and allow it to cure without knocking it down. *Approximate coverage is 500 sq. ft. per mix.*

Then splatter a second texture coat and knock it down. The texture created by the first coat will "catch" the texture from the second coat as it is being troweled and keep it from "smearing".

*Approximate coverage is 450 sq. ft. per mix.*

**Dash Finish** – To produce a Kool-Deck finish, the finished surface should expose a 40% flat – 60% void surface. The flat-void pattern is achieved, beginning with a very light troweling, which produces a hard, dense surface. The mix ratio for a Kool-Deck finish is:

- INNOTECH MICRO-TOPPING EXT Liquid 5-gallons
- INNOTECH MICRO-TOPPING EXT base coat 2-1/4 bags

When using this finishing technique, dash or shake the material off a Mortex-type Dash Brush or Rice Brush in even strokes to 90% coverage. This tool can usually be found in swimming pool supply stores or concrete accessory stores. Allow the material to set-up for 10-15 minutes or until it loses its wet-glaze. Walk through the material on spiked shoes and lightly flatten the peaks of the texture with a trowel. Troweling may be done with a hand trowel or walking trowel. To set the pattern by hand, use a pool plaster trowel (well broken in). The trowel should be held flat, using a very light hand. The walking trowel consists of a wide, flexible blade that attaches to extension handles. To set the pattern, suspend the trowel over the work and lower it until a slight amount of pressure is exerted. Always use a pulling motion. The flexible blade will follow the contour of the slab, producing a very light flat-Void Pattern. The walking trowel is especially useful for its speed and long reach on large areas. Closely follow behind this operation with a second pass of the walking trowel. To finish out the texture, correct any uneven pattern by holding the hand trowel flat to attain the desired 40% flat – 60% void pattern. A final, sharp troweling pass may be necessary after the material has set to clean away any fuzz-marks, fin ridges or trowel licks left from flat troweling. If necessary, the texture may be lightly sanded with a floor sander once it has cured (4-6 hours), to obtain a more uniform finish. *Approximate coverage is 450 sq. ft. per mix.*

**Drop Finish** – to produce a rounded-Drop or Drip finish, the mix ratio is:

- INNOTECH MICRO-TOPPING EXT Liquid 5-gallons
- INNOTECH MICRO-TOPPING EXT base coat 1-1/4 bags

Use a Mortex-type Dash Brush or rice Brush for this finishing technique. Dip the dash brush into the material and drip the material off the brush by shaking the brush with quick back-and-forth wrist actions while holding the brush at chest height. Keep the dash brush moving and always try to keep it shaking for best results. This will help to control unwanted lines or streaks of material from disfiguring the texture. Pull the brush out of the bucket from different directions to avoid puddling the material around the bucket. Avoid texturing over previously textured areas that have cured to prevent overlap from doubling the texture. Each brush full of material should cover about 2-3 sq. ft., depending on the coverage and surface profile desired. The rounded Drop or Drip finish is achieved by applying the texture over 50%-60% of the surface. Dash excess material off of the brush periodically. It is a good idea to periodically flush the dash brush with water and wire-brush it to clean dried material off the bristles. This will help to ensure that the flow of material off the brush is uniform. The material will gradually stiffen in the bucket as it begins to set. The stiffer the material becomes, the slower it will flow off the brush and the less it will self-level on the surface. Never mix more material than can be applied in 30 minutes. *Approximate coverage is 500 sq. ft. per mix.*

The Dash Brush method requires a certain amount of artistic skill on the part of the applicator. Patience and an ability to apply the texture symmetrically are essential to achieving a professional looking finish. No two mechanics will produce exactly the same texture. It is recommended that the same mechanic do all the texturing for best results.

**Allow all texture coats to cure (24) hours before sealing.**

## When Using INNOTECH Chemical Stain<sup>†</sup> or INNOTECH Liquid Dye Concentrate<sup>†</sup>

- Once desired finish is achieved, material should be left to cure for 24 hours prior to staining.
- INNOTECH MICRO-TOPPING EXT may not stain according to the corresponding color charts. The combination of polymers and cement in INNOTECH MICRO-TOPPING EXT may cause stains/dyes to react differently.
- Always test or sample stains/dyes in an inconspicuous area to ensure desired color effects are achieved.
- When using INNOTECH CHEMICAL STAINS<sup>†</sup>, it is highly recommended that a sample mock-up be done for desired results. Some chemical stains, due to their high intensity of color, may need to be diluted prior to staining INNOTECH MICRO-TOPPING EXT.
- For best results, stain INNOTECH MICRO-TOPPING EXT within 72 hours of application. Waiting longer than 72 hours can result in the stain not penetrating fully

## Maintenance

For sealing concrete, choose from a variety of INNOTECH water-based and solvent-based sealers appropriate to project requirements:

Please reference the "INNOTECH SEALER AND MAINTENANCE PRODUCT GUIDE" to determine the correct sealer for a specific application.

1. Allow INNOTECH MICRO-TOPPING EXT to fully cure before sealing, minimum 24 hours. Sanding the top finish coat with a 100- to 150-grit sanding screen or the use of INNOTECH Con-Clean<sup>†</sup> may allow better adhesion of the sealer.
2. After sufficient curing, if water gets on the surface before sealing, a white film can result. While this film won't affect the bond or durability, the film should be cleaned off before sealing. Clean with INNOTECH Con-Clean<sup>†</sup> and clear water rinse.
3. Do not allow water on the surface until INNOTECH MICRO-TOPPING EXT has completely cured. Excessive water before sufficient curing will affect sealer bond and durability.

## Product Limitations

- INNOTECH MICRO-TOPPING EXT will stick to almost everything and is much easier to clean off when it is still wet. Otherwise, sanding, grinding or chipping may be required to remove unwanted material.
- Never mix water with INNOTECH MICRO-TOPPING EXT when thinning is required – use INNOTECH MICRO-TOPPING EXT Liquid only.
- If the INNOTECH MICRO-TOPPING EXT has started to set up, do not attempt to remix.
- Pull masking tape off as soon as possible for easiest removal. Use duct tape or filament tape for best results.
- When applying INNOTECH MICRO-TOPPING EXT in full sun, on a hot day, or in high winds, expect greatly reduced working time.
- Do not apply INNOTECH MICRO-TOPPING EXT at temperatures below 40 °F for when such temperatures may be expected during its drying and curing time.
- INNOTECH MICRO-TOPPING EXT is never to be applied over joints, moving or working cracks, cracks greater than 1/16-inch, or any untreated or unprepared surfaces.
- Hot Weather Conditions: Extended working time in hot weather conditions by adding 4-oz. of INNOTECH Micro-Topping EXT Retarder to 5-gallons of INNOTECH Micro-Topping EXT Liquid.

## Available Packaging and Coverage Information

**Important:** Actual coverage may vary depending on color choice, application method, and other local conditions.

- INNOTECH MICRO-TOPPING EXT Base Coat Powder is produced in 55-lb bags: Coverage rate is 200-400 square feet.
- INNOTECH MICRO-TOPPING EXT Finish Coat Powder is produced in 55-lb bags: Coverage rate is 600-1000 square feet.
- INNOTECH MICRO-TOPPING Liquid is available in 5-gallon pails.
- INNOTECH MICRO-TOPPING EXT Retarder is available in 4-oz. bottles.

## Product Shelf Life/Storage

INNOTECH MICRO-TOPPING EXT has a shelf life of approximately 18 months. **Important:** Avoid storing bags and liquid in hot warehouses or storage trailers as it will dramatically decrease the pot life and working time.

**Liquids:** INNOTECH MICRO-TOPPING EXT Liquid products should be stored indoors and above freezing temperatures. If the Liquid freezes, discard.

**Powder:** INNOTECH MICRO-TOPPING EXT powders should be stored indoors and away from moisture.

## Product Handling

Prior to using INNOTECH MICRO-TOPPING EXT, please reference the corresponding Material Safety Data Sheet to ensure safe handling.

## Product Warranty

INNOTECH MICRO-TOPPING EXT is a proprietary product, warranted to be of uniform quality within our stringent manufacturing tolerances. As no control is exercised over the product use, no warranty is made as to the effects of such use (neither expressed or implied). Obligation of the seller and manufacturer under this warranty shall be limited to a refund of the purchase price of that portion of the material proven to be defective. The user assumes all other risk and liability resulting from uses of this product. Contact INNOTECH with any questions regarding this policy. *Innotech is a registered tradename of CHROMASYSTEMS LLC, an Ohio company.*

**†PLEASE REFER TO THE CORRESPONDING TECHNICAL BULLETIN FOR PRODUCT AND APPLICATION DATA.**

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