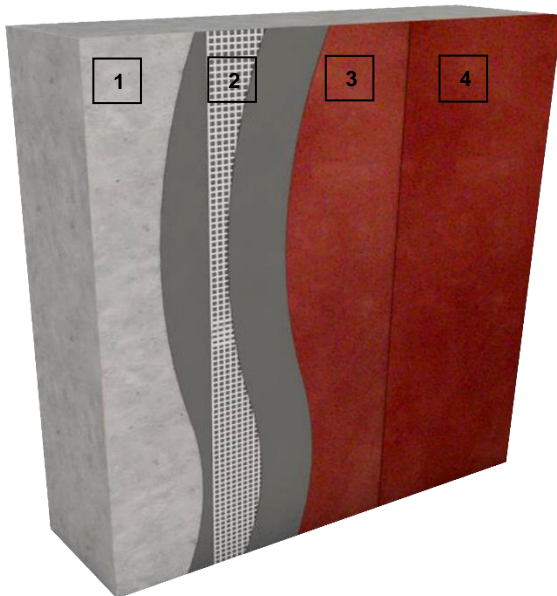


**DESCRIPTION** • *TopCrete Micro Topping Vertical System* is a finish system for walls, furniture, and counters, that can be applied to smooth plaster, cement, gypsum, and timber boards, or fair-faced concrete to produce a smooth finish simulating polished concrete, antico stucco, or Venetian plaster. The system is applied in small thicknesses of no more than 2 mm and unlike traditional Venetian plaster and antico stucco, is suitable for both interior and exterior applications. *TopCrete 220* is also a much more durable alternative to acrylic paints.

## MATERIALS & TOOLS

- ✓ *TopCrete 220* Micro Topping.
- ✓ *FoamFix ST/XT* Base Coat.
- ✓ *PatchCrete 101* Multi Use Repair Mortar.
- ✓ Sealers: *A-Z HydroSeal*, *A-Z Ultra Sealer*, *A-Z Mega Sealer*, *ElastoCrete 212 Water Based Polyurethane*, or *A-Z Penetrating Sealer*.
- ✓ A fiberglass reinforcing mesh such as *ShieldCrete SD 125 g* mesh or *InsuCrete Standard 160 g* mesh (optional).
- ✓ *A-Z Prime Bond* (optional).
- ✓ Heavy duty variable speed drill fitted with a rapid set type mixing blade.
- ✓ High quality stainless steel trowels, square type recommended.
- ✓ Miscellaneous: empty pails, measuring cups/pails, hand-pump sprayer...etc.

## SYSTEM ILLUSTRATION



1. Substrate: smooth plaster, fair-faced concrete, or plaster board.
2. *FoamFix ST/XT* with embedded fiberglass mesh (optional).
3. *TopCrete 220*, recommended minimum 2 coats.
4. Sealer coat.

**SYSTEM CONFIGURATION** • Due to its unique formulation, the *TopCrete 220* micro topping system is very versatile and may be applied in a variety of system configurations and techniques depending on desired effect and substrate conditions. *TopCrete 220* may be applied directly to fair-faced concrete or plaster, but depending on the uniformity of the substrate the below is a typical system that fits most needs and provides the best results:

- For moisture-sensitive substrates such as timber panels or gypsum boards, a coat of *A-Z Prime Bond* must be applied just prior to application of the base coat.
- A base coat of *FoamFix ST* or *XT* applied by trowel is highly recommended to unify the surface absorbency of the substrate, cover any deformities, and provide a smooth and level surface for application of the micro topping. Because *TopCrete 220* is applied in a thickness of a fraction of a millimeter, any deformities or non-uniformity in the substrate might show through the micro topping layer. For disjointed substrates, such as cement or gypsum boards, or for cases where the plaster substrate is of questionable quality, a layer of fiberglass mesh such as *ShieldCrete SD* or *InsuCrete Standard* fiberglass mesh must be embedded into the *FoamFix* coat.
- Minimum two coats of *TopCrete 220* as needed to achieve desired effect.
- Sealer coat to protect against accidental staining or chemical attack. *A-Z HydroSeal* or *A-Z Mega Sealer* are easy to use single component topical sealer that provide excellent protection while producing a natural and attractive finish. For applications requiring a higher level of protection against chemical attack such as counters, multi coats of *ElastoCrete 212* water-based polyurethane are recommended.

**LIMITATIONS** • *TopCrete 220* system must be applied over structurally sound and non-moving surfaces. Do not apply in areas subject to negative hydrostatic pressure. All moving joints in the existing substrate must be extended through the full depth of the topping system, allowing for the simultaneous movement of the substrate and the *TopCrete 220* topping. Cracks or joints in the existing substrate will reflect through the *TopCrete 220* overlay unless treated. Do not apply if ambient or substrate temperature is expected to drop below 5°C during installation or in the proceeding 48 hours, or if rain is expected in the proceeding 24 hour period after application. Do not mix or apply when ambient temperature is expected to exceed 40°C.

**SUBSTRATE PREPARATION** • All bases must be cured, sufficiently rigid, and clean of any surface contamination such as oil, dirt, grease, coatings, curing compounds, paint, and laitance that may

prevent proper adhesion. If necessary, clean the surface by sanding or light grinding. Dense, smooth surfaces, and those retaining excessive amount of form release agent can cause delamination from the base and must be prepared by mechanical means such as light grinding. Any painted or coated surfaces should be sandblasted or grinded to remove existing coatings. If detergents or soap are used insure that the substrate is thoroughly washed with clean water to prevent the formation of a film that can cause bonding failure.

Since *TopCrete 220* is a fine coating, the substrate must be levelled to the required tolerance before installation. Fill low areas in the substrate with a cementitious patching material such as *PatchCrete 101* or equivalent. If the concrete substrate is highly porous or absorptive or to increase the bonding between the substrate and the patching material, prime with surface of the concrete with *A-Z Primer Bond* or *A-Z Hi Bond*. For moisture sensitive substrates, such as gypsum or timber boards, apply one or two coats of *A-Z Prime Bond* then apply the rest of the system while the coating is still tacky.

Surrounding areas should be covered and protected from material spills and equipment contact. Rope off work area and close off to traffic and other trades until after the sealing stage.

All delaminated and spalled areas of the substrate shall be repaired prior to application with *PatchCrete 101 Multi-Use Repair Mortar*. Patches shall be flush with the surrounding surface and shall match the texture of existing surfaces.

For old masonry surfaces, it is recommended to sufficiently moisten the surface of the plaster or concrete at least one day before application of the sealer.

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**MIXING** • Mixing should be done with a drill mounted rapid set type mixer or other type of mixer suitable for viscous materials. Always add clean potable water first. Mixing duration should last for five minutes to insure proper color and material dispersion within the mix. *TopCrete 220* is not sensitive to the water ratio and it may be varied as needed to achieve the desired consistency and viscosity most suitable for the application technique and desired effect. Generally, if application is going to be carried out with a steel trowel and thicker consistency will be desired; a water to powder ratio of 1 to 2.5-3 or higher by volume is suitable. For application by roll as an alternative to paint, the water ratio may be increased as necessary to produce the necessary coverage.

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**BASE COAT** • In principal, *TopCrete 220* may be applied directly on fair-faced concrete or smooth finished plaster, however, in order to unify the substrate surface absorbency and provide a level and uniform surface for application of the micro topping, it

is highly recommended to first apply a base coat of *FoamFix ST* or *XT*.

When working on moisture-sensitive substrates such as gypsum boards or timber panels, it is highly recommended to prime the surface with a coat of *A-Z Prime Bond*. Apply the coating with a short-hair roll until the coating is fully absorbed and covering the substrate. Do not allow to dry fully, the *FoamFix* layer must be applied on the *A-Z Prime Bond* coat is still tacky.

If a priming coat of *A-Z Prime Bond* was not applied, lightly mist the surface of the substrate with a hand-pump sprayer. Mix the *FoamFix* powder with water-mounted rapid set mixer to a plaster-like consistency. Please refer to the relevant CCC data sheet for the proper water ratio. Apply a layer of *FoamFix ST/XT* using a rounded-ends stainless steel trowel, using sufficient pressure to press the material onto the substrate; the coat should be 1-2 mm thick, or as needed to cover any imperfections in the surface of the substrate. Trowel to a smooth surface; any embellishes or imperfections in the surface will show through to the *TopCrete 220* layer.

If applying on a disjointed surface such as cement, gypsum, or plywood boards, or if the plaster surface is of questionable quality, embed fiberglass mesh such as *ShieldCrete SD 125 g mesh* or *InsuCrete Standard 160 g mesh* into the *FoamFix* layer by troweling the mesh into the wet *FoamFix* coat immediately after application and while it is still wet. Follow with a second skim coat of *FoamFix* to completely cover the mesh; the mesh must not ghost through the *FoamFix* layer. As before, trowel the *FoamFix* to a smooth finish.

Allow the final *BondCrete* coat to cure overnight before application of the *TopCrete 220* micro topping. Do not water cure.

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**APPLICATION** • *TopCrete 220* may be applied by trowel, scrapper brush, roll, sponge, or spray, depending on the intended effect. The number of coats applied depends on the desired effect, and in general it is recommended to build up thickness of the system over multi coats, if required, rather than in a single application. The system may be configured in any number of ways, but generally two coats will be required to fully cover the substrate and achieve the desired finish effect.

Application by a square-ends stainless steel trowel will achieve the most desirable effect. Burnish as needed to achieve the desired color effect; harder troweling will produce a more variegated coloring effect. Allow each coat to fully dry before applying the proceeding coat. Applying a third final light coat with a higher water ratio and/or possibly different color will produce more color variations and visual effects.

Allow the final micro topping coat to cure overnight, then lightly sand the surface to remove trowel ridge marks and bring out more of the unique visual effect of TopCrete 220. The sanding paper may progress from 80 grit to higher grit number to achieve a more polished and finer appearance.

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**CURING** • DO NOT WATER CURE. *TopCrete 220* is self-curing and must only be air cured. The topping must be left to cure for a minimum of 24 hours prior to sealing.

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**SEALING** • Though not mandatory, it is highly recommended to seal the micro topping surface against accidental staining from liquids, food stuffs, and other chemical agents. On countertop applications sealing may be necessary, especially if constant moisture presence or food handling is expected.

Generally, for wall applications a penetrating type water repellent such as *A-Z Penetrating Sealer* may be sufficient. However, a light coating with a topical sealer is preferable and will provide higher levels of protection. A coat or two of *A-Z HydroSeal* diluted with clean potable water at 1:1 ratio will give a natural appearance that preserves the color effects produced by troweling, while providing good water and stain repellency. Apply the sealer by using a hand-held pump sprayer evenly spraying a thin coat over the micro topping coat. Two coats are recommended for areas that may be subject to frequent contact with water. Alternatively, *A-Z Mega Sealer* (satin finish) or *A-Z Ultra Sealer* (glossy or matte) may be used, though the latter will tend to unify the color and produce a thicker coating layer.

For countertops where higher chemical resistance is required it is recommended to apply a minimum of two coats of a higher-grade sealer, such as *ElastoCrete 212* water-based polyurethane, by roll. *A-Z Mega Sealer* may also be sufficient depending on the level of stain protection required. Please refer to the relevant CCC data sheet for chemical resistance test results.

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**MAINTENANCE** • Depending on use, exposure to moisture and other chemical attack, periodic inspection should be made for sealer wear; inspection should take place at least annually for commercial applications. A dull or discolored surface usually indicates the need for reapplication of the sealer coat.

If the existing sealer coat has not been damaged by staining, a new coat may be applied after lightly sanding the old coating; be careful not to use rough

sand paper that may damage the decorative topping under the sealer. If the old sealer coat has been heavily stained, it must be completely striped off chemically with a paint remover. Clean the surface with a towel lightly dampened with solvent, allow to dry then apply the new sealer coat.

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**CLEANING** • Clean hands, tools, and equipment promptly with fresh water.

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**SAFETY PRECAUTIONS** • KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY. Refer to the relevant CCC technical data sheets for each product for specific warnings and precautions. A dust mask (NIOSH/MSHA TC 21C approved), safety goggles, and gloves should always be used when handling cementitious products. Use goggles, protective clothing and vinyl gloves when handling sealers and solvent containing solutions. Work in a well-ventilated area.

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**FIRST AID:** Eyes – Do not rub eyes, immediately flush with plenty of fresh water while holding eyelids apart. Skin – Wash with soap and water. Inhalation – Leave the area if experience difficulty breathing. Ingestion – Immediately give large amounts of water and induce vomiting; seek immediate medical attention.

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### Creative Concrete Concepts

PO Box 925794, Amman 1110, Jordan; Tel +962-6-487-4078, Fax +962-6-488-9133 • PO Box 91234, City of Industry, CA 91715-1234, USA; Tel +1-909-266-0709, Fax +1-909-266-0711 • PO Box 31017, Sharjah, UAE; Tel +971-6-532-1119, Fax +971-6-532-8833