

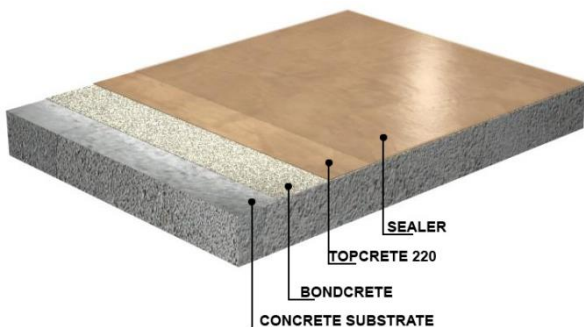
DESCRIPTION • The *TopCrete Micro Topping System* is a floor overlay/topping system that is applied in small thickness, typically 2-3 mm, over existing floors for renovation of concrete floors or to simulate the look of a polished concrete flooring. The system is applied in a multi-coat process consisting of the priming layers, the micro topping skim coat layers, and the sealer layers.

MATERIALS & TOOLS •

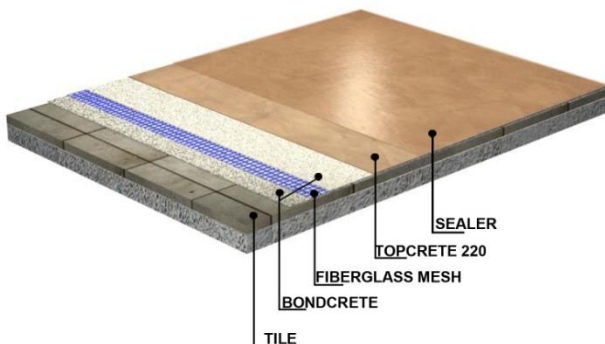
- ✓ *TopCrete 220* Micro Topping.
- ✓ *BondCrete* Bonding Slurry.
- ✓ *PatchCrete 101* Multi Use Repair Mortar.
- ✓ Any one of combination of sealers: *A-Z Super Sealer*, *A-Z Ultra Sealer*, *A-Z Mega Sealer*, *ElastoCrete 212 Water Based Polyurethane*, or *EpoCrete 100W Water Based Epoxy*.
- ✓ A fiberglass reinforcing mesh such *ShieldCrete MD* or *SD* (optional).
- ✓ *A-Z Prime Bond* (optional).
- ✓ Heavy duty variable speed drill and jiffy mixer.
- ✓ High quality stainless steel trowels.
- ✓ Squeegees and/or a serrated squeegee.
- ✓ Miscellaneous: empty pails, measuring cups/pails, hand-pump sprayer, short-hair nap roller (optional) ...etc.

SYSTEM ILLUSTRATION •

Installation on Concrete Floor



Installation on Tiled Floor



SYSTEM CONFIGURATION • The *TopCrete 220* micro topping system is very versatile and may be applied in any number of coats and techniques to achieve a variety of effects. A recommended system

configuration for a highly durable and UV resistant flooring is composed of the following:

- Two priming coats of *BondCrete* applied by squeegee; *ShieldCrete* fiberglass mesh between the two coats for installation on tile.
- Two coats of *TopCrete 220* by squeegee.
- Final coat of *TopCrete 220* by steel trowel or scrapper.
- First sealer coat of *EpoCrete 100W* water based epoxy, *ElastoCrete 212* water based polyurethane sealer, or *A-Z Ultra Sealer* acrylic sealer.
- Second sealer coat of *ElastoCrete 212* water based polyurethane sealer.

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. It is highly recommended that a coat of *BondCrete* or key coat first be applied to the flooring surface prior to application of *TopCrete 220*. It is also highly recommended to seal the surface on flooring applications to protect against stains. Do not apply if ambient or substrate temperature is expected to drop below 10°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, and laitance that may prevent proper adhesion. If necessary, clean the surface by shot blasting, scarifying, 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 concrete substrate must be levelled to the required tolerance before installation. Fill low areas in the substrate with a concrete 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*.

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 cracks larger than hairline shall be considered as moving and must be repaired with *MortCrete 3000 Epoxy Mortar* and fiberglass mesh; apply silica aggregates over the wet epoxy mortar to provide mechanical keying. All delaminated and spalled areas of concrete shall be repaired prior to application with *PatchCrete 101 Multi-Use Repair Mortar*. Remove all unsound concrete. Patches shall be flush with the surrounding surface and shall match the texture of existing surfaces. If the concrete substrate is highly porous or of questionable integrity, it may be primed with *A-Z PrimeBond* by spray application.

For old concrete surfaces, it is recommended to water the surface of the concrete at least one day before application of the sealer. Do not apply excessive amounts of water that might cause moisture to be trapped in the concrete. If applying over polished surfaces such as cementitious terrazzo tile or power trowelled concrete surfaces, it is recommended to open the pours of the substrate by light grind, sanding, or acid etching. Make sure to thoroughly clean the surface from any resulting debris or dust by washing with clean water.

PRIMING • Before application of the primer, lightly mist the surface of the substrate with a hand-pump sprayer. A coat of *BondCrete* must first be applied to the substrate in order to unify the surface absorption and provide mechanical keying to the overlay. Mix the *BondCrete* powder with water at a one-to-one ratio or as desired to produce a low to medium viscosity compound; use a drill-mounted jiffy-type mixer and mix for five minutes. Pour the mix over the substrate and spread around using a squeegee to cover and wet the entire surface of the substrate. The first coat should also cover any small holes in the substrate that might not have been filled with a concrete patching compound, but should not be used to level the substrate surface or fill major holes or patches. Allow the first coat to dry completely before applying the second coat, preferably overnight or as weather conditions permit. The second coat should produce a uniform surface with a light texture. After the second coat has dried completely, use a medium grit sandpaper to remove any bumps or clots formed on the *BondCrete* surface.

If applying on a tiled surface or a concrete surface of questionable quality and/or hairline cracks, it is recommended to embed fiberglass mesh such as *ShieldCrete SD* or *MD* between the two *BondCrete*

coats. Pre-cut the fiberglass mesh in sheet sizes that are easy to handle, then place with the curled face down on the wet surface of the first *BondCrete* coat. Allow to dry over night then apply the second coat of *BondCrete*; a third coat may have to be applied to cover the mesh completely. Alternatively, the second *BondCrete* coat may be applied with a serrated squeegee in order to increase the application thickness. In any case, do not allow the mesh grid to show through; it should be completely covered by the *BondCrete* layer.

Allow the final *BondCrete* coat to dry completely before application of the *TopCrete 220* micro topping, preferably overnight or as weather conditions allow.

MIXING • Mixing should be done with a drill mounted jiffy-type mixer at low speeds or a paddle type mixer. Always add clean potable water first. Mixing duration should last for five minutes to insure proper color and material dispersion within the mix. The water to powder mixing ratio depends on the application method and intended effect. A water to powder ratio of 1 to 1 or 1.5 gives a fluid consistency suitable for squeegee or roll application. For trowel or scrapper application, a water to powder ratio of 1 to 2 or 3 may be used.

APPLICATION • *TopCrete 220* may be applied by sponge, brush, roll, spray, or trowel, depending on the intended effect. The number of coats applied depends on the desired effect, and in general it is recommended up thickness of the system over multi coats rather than in a single application. The system may be configured in any number of ways, but it is recommended to apply a minimum of two coats of *TopCrete 220*, with the first coat applied by squeegee. Allow each coat to dry completely before applying the second coat. In any case, never apply *TopCrete 220* by trowel or scrapper unless it is the final coat; a steel trowel closes off the pours and prevents subsequent layers of *TopCrete 220* from adhering well. The method of application of the final coat depends on the desired look: a squeegee or roll application will give a monotone color effect and lightly textured surface, whereas a steel trowel or scrapper will give a variegated color effect and a smooth, polished surface. For best results and a durable flooring, it is recommended to apply the first two coats by squeegee and the final coat by trowel or scrapper.

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

SEALING • It is highly recommended to seal flooring applications of *TopCrete 220* against staining and absorption. A number of sealers available from CCC may be used: *A-Z Ultra Sealer* solvent based acrylic sealer, *A-Z Super Sealer* a solvent based ethyl methacrylate acrylic sealer, *A-Z Mega Sealer* water based acrylic urethane sealer, *ElastoCrete 212* water based polyurethane sealer, or *EpoCrete 100W* water based epoxy sealer. *TopCrete 220* must be allowed to cure for a minimum of 24 hours before sealing. Lightly sanding the surface of *TopCrete 220* is recommended prior to application to remove any bumps, ridges, or laitance in the surface. Sealed surfaces should be inspected periodically for traffic-worn areas and re-sealed as necessary.

MAINTENANCE • Depending on traffic density, 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 flooring under the sealer. In the case of solvent-borne acrylics, sanding may not be necessary as the existing acrylic coat is usually re-emulsified by the solvent in the new coat. If the old sealer coat has been heavily stained, it needs to be completely removed before applying a new coat. Use paint remover from National Paint or equivalent. Clean the surface with a towel lightly damped with solvent, allow to dry then apply the new coat. Though the coating will be dry to the touch in a few hours, it is recommended to allow it to cure for at least 12 hours before allowing foot traffic in.

For additional protection of the sealer and to reduce the required sealer reapplication intervals, a layer of wax may be applied after the sealer has cured. The wax must be completely removed prior to sealer reapplication. Please consult the manufacturer for removal instructions.

CLEANING • Clean hands, tools, and equipment promptly with fresh water. For *A-Z Ultra Sealer* and *A-Z Super Sealer*, tools and equipment must be cleaned with an organic solvent.

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.

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.