



CON-SPEC COUNTER-CRETE

DESCRIPTION:

Con-Spec Counter-Crete is a unique preblended cementitious material for casting concrete countertops. It is a non-shrinking concrete that requires only potable water for mixing. Counter-Crete is versatile and allows for creative blends. It can be used neat or with plain/coloured stones or objects. It is compatible with all concrete colours and staining methods. Curing time is much faster than standard concrete. This allows the countertop to be removed from its mold 8-10 hours after casting and it's surface to be coated or polished within 24 hours. (If the surface is to have a sealer/coating, it is recommended that a light cleaning be performed to remove any surface laitance of cement dust.)

USES:

Con-Spec Counter-Crete is a countertop mix that is user friendly for the novice but also meets the demands of the professional installer. Counter-Crete can also be used as a general purpose concrete patching material, for interior applications, where an extended working time is desired.

CHARACTERISTICS:

Con-Spec Counter-Crete is a versatile concrete material that can be modified with various ingredients to alter its characteristics. Addition of fibres will improve the flexural strength, and early curing performance. The addition of latex modifications will increase bond strength, flexibility and reduce permeability.

LIMITATIONS:

Applications over 7 cm (3") in thickness require the addition of 1 cm (3/8") stone to a maximum of 22.7 Kg (50 lbs) by weight per 25 Kg (55 lbs) bag. Temperatures below 0°C (32°F) will require the use of accelerator and/or the use of heated water.

COMPOSITION:

Con-Spec Counter-Crete contains a proprietary cement and specially selected aggregates and admixtures.

COVERAGE:

Con-Spec Counter-Crete is packaged in 25 kg bags and will yield approximately 0.5 cubic feet or 0.014 cubic meters per bag at 4.0L of water per bag. A 25 kg bag of Con-Spec Counter-Crete at 1.5" deep will provide roughly 4 square feet of concrete countertop area.

PROPERTIES: (@23°C)

(@3.75L/25Kg Bag)

Compressive Strength (ASTM C39 / C109)

24 hours Mpa (psi)	62.8	(9,100)
7 Days Mpa (psi)	75.0	(10,800)
28 Days Mpa (psi)	90.5	(13,100)

Bond Strength (ASTM C882)

24 hours Mpa (psi)	20.0	(2,900)
28 days Mpa (psi)	24.2	(3,500)

Flexural Strength (A23.2-8C)

(@4L/25Kg Bag)

7 Days Mpa (psi) Neat	7	(1015)
7 Days Mpa (psi) with 1/2" glass fibre	10	(1450)

USE AS PATCH MATERIAL:

For patching concrete surfaces: Surface must be structurally sound, free of loose or deteriorated concrete, dust, dirt, and other contaminants. Clean and prime exposed steel and reinforcing. When substrate is not absorptive, abrade as necessary to ensure proper bonding. Prewet the prepared area with potable water to achieve a saturated surface dry condition before application. To ensure complete bond with the entire surface, a prime coat of Counter-Crete mixed with water or our Latex Bonding Admixture as a slurry coat may be scrubbed into the concrete surface. After mixing firmly place into the prepared area with sufficient force to fill all holes and voids, and then trowel to a smooth finish. On large areas, use a screed to obtain a uniform level surface before trowelling.

FORMING:

Cabinet Preparation for Cast-in-Place: •Use concrete backer board for cabinet sub-top or plywood with a moisture barrier. (The application of 2 coats of Con-Spec Latex Bonding Admixture then allowing to dry between coats will protect the plywood). Protect the cabinet facing and floor from concrete spills with a drop cloth. •Edge Forms: Use a chop saw to mitre inside and outside corners. Clamp, screw or build a temporary wood support and attach the edge forms to the cabinets. Place the edge forms below the substrate surface to hide the exposed edge. Seal all joints. •Reinforcement: Use ladder wire 1/2" from the tension surface of the slab.(Typically bottom of countertop). Wire mesh is not strong enough and rebar in general is too thick for countertops.

Notice to User - Con-Spec Industries Ltd. warrants that the product described on the face hereof has been manufactured of selected raw materials by skilled technicians. Con-Spec Industries Ltd. shall not be responsible for any claims resulting from the failure to utilize the product in the manner in which it was intended and in accordance with instructions provided for use of product. The only obligation of Con-Spec Industries Ltd. shall be to replace any quantity of this product which proved to be defective. Con-Spec Industries Ltd. assumes no liability, loss, or damage resulting from use of this product. **Your use of this product constitutes your acknowledgment and acceptance of these terms and limitations.**

MIXING INSTRUCTIONS:

It is highly recommended that a test casting be done to become familiar with the characteristics of Counter-Crete. This will also provide an opportunity to determine the suitability of the casting method, colours and sealers.

Con-Spec Counter-Crete will require 3.5 to 4 litres of potable water per 25 kg bag, to achieve the proper mix consistency. Add the Counter-Crete to the water and thoroughly mix to the proper consistency, mix for 3 minutes minimum but no more than 5 minutes in total.

If adding colour, carefully measure each colour to ensure uniform amount is incorporated into each batch of Counter-Crete. Even small variations in colour volume may cause noticeable colour variations in the finished product. Each 100 grams of colour is equal to a 1% loading, so to achieve a 3% colour loading add 300 grams of colour to each bag.

To fill areas 7 cm (3") deep or greater, add clean, dry 1 cm (3/8") size pea rock or chip stone to the Counter-Crete. The mix ratio must not exceed 22.7 kg (50 lbs) of rock to each 25 kg (55 lb) bag of Counter-Crete.

Mixing procedure: 1) Start mixer, 2) load water, 3) load rock, and 4) load the Con-Spec Counter-Crete.

WORKING CHARACTERISTICS:

Working time for Con-Spec Counter-Crete is 45-60 minutes. The countertop can be removed from the form 8-10 hours after casting. If the countertop is being pre-cast it is recommended that the countertop be removed from the form within 12 hours. The countertop can be polished or coated 24 hours after casting. The mixed material trowels easily and has a workable consistency at all water contents. After initial set, Counter-Crete will gain strength quickly and start to heat up. It is important to wet cure for 3-4 hours or until countertop returns to ambient temperatures.

APPLICATION TECHNIQUES:

Float the Counter-Crete firmly into the form by hand or with a trowel filling to the edges and all voids. Then trowel to a smooth finish. On large areas, use a screed to obtain a uniform level before trowelling. Consolidate the edges with a palm sander or pencil vibrator. Re-float the surface. Allow the concrete to take an initial set before steel trowelling. Avoid burning the surface with a magnesium float or steel trowel. To avoid ghosting do not pour material directly on the steel reinforcement. Any vibration or movement can cause ladder wire imaging (ghosting) to appear in finished product.

CURING TECHNIQUES:

Con-Spec Counter-Crete MUST be water cured. Proper curing increases the strength and durability of the concrete. During the initial hydration phase Counter-Crete demands moisture and the rapid reaction generates significant heat. If sufficient moisture is not provided during curing process, cracking and curling is possible. Moisture can be provided through ponding or repeated wetting for 3-4 hours after casting, long term stability and strength are preserved and ensured.

FIBRES & GFRC:

Glass fibre reinforcement can be used to make Con-Spec Counter-Crete even stronger while reducing any possible plastic shrinkage cracking. Fibres will also increase the flexural strength of the countertop dramatically. Without any preplanning, these fibres will be visible on the surface of the countertop if a diamond grind and/or polish is done.

The glass fibres are inert, non-corrosive and alkali resistant. They are designed to reinforce the Counter-Crete, and are available in 500 gram and 20 kg bags.

The fibres are added to the mixed Counter-Crete and thoroughly blended for 2-3 minutes before placement of the Counter-Crete in the form. Do not over mix the fibre mixture. The addition of the fibres will reduce the flowability of the Counter-Crete. Fibres may stick up in the finished top surface.

GFRC (Glass Fibre Reinforced Concrete) is normally cast around 1/2 to 3/4 inch in thickness. Due to the thin nature of the concrete it loses moisture much more rapidly than a thicker section. This then requires the use of polymers to help hold moisture in the concrete mix.

Proper curing of the GFRC is essential. After initial set, when the surface is strong enough not to be marred, mist the counter-Crete with water. Wet towels or burlap may also be used but the placement of plastic/poly over top is then crucial to prevent the towels from wicking moisture up from the Counter-Crete GFRC.

This GFRC mix may also be used to make "bendable Concrete". Approximately 30 minutes after mixing at 20°C the Counter-Crete GFRC may be molded, ie the form manipulated to create the bends required for your casting.

GFRC FORMULATION:

For each 25 Kg bag of Con-Spec Counter-Crete use:
775 grams AR Glass Fibre
1.25 Litres PolyPlex Polymer
3.25 Litres Water

CLEAN UP:

Clean application tools and mixing equipment with water immediately following use.

SAFETY PRECAUTIONS:

Product contains cement and is alkaline on contact with water. Wear dust, skin, and eye protection. Irritating to eyes and skin. Avoid splashing into eyes or contact with skin. In case of eye contact, flood eyes repeatedly with water and call a physician immediately. **DO NOT RUB EYES!** Wash hands thoroughly with soap and clean water after handling. Do not take internally. Keep out of reach of children. Consult Safety Data Sheet for further information.