



# EverKrete Installation Manual.

## The For EverKrete Concrete Repair System



### Description

The EverKrete concrete repair system utilises the high performing properties of EverKrete102 Thermoset Vinyl Polymer which when mixed with kiln dried aggregates and sand makes EverKrete mortar. This most versatile mortar can be used for filling horizontal, overhead and vertical surfaces.

EverKrete 102 when saturated with sand forms a tough slip resistant overlay surface.

The EverKrete concrete repair system incorporates EverKrete102 advanced thermoset vinyl polymer resin binder. By using EverKrete Catalyst and Accelerator for controllable curing times in environments from -18 - +35dgC. The EverKrete concrete repair systems can be:

- Packable to self-leveling viscosity
- High build to a feather edge
- Smooth to an aggressive slip resistant finish
- Horizontal applications.
- Vertical to overhead applications when utilising EverKrete LVF or Fumed Silica .
- A myriad of colours.
- Concrete Overlay Systems
- In -18dg environment's when utilising EverKrete Accelerator.
- EverKrete mortar has been designed for the handyman though to the contractor to be able to achieve a return to full traffic use in 45 – 90 minutes.

### Acceptable Substrates

- Concrete after curing period of 28 days.
- 3:1 sand cement screed or C-Bed.
- Masonry / render after curing period of at least 4 days.
- Pre-cast concrete once release agent has been removed/ dissipated.
- Brickwork, Hebel and concrete blocks

### Limitations

- Do not use when surface temperature is below -18dg C or above +35dg C
- If not utilising EverKrete Accelerator, surface temperature must be between 10dg C and +35dg C
- Do not apply on damp, wet, or contaminated substrates, if it is raining or if rain is imminent.

- Vertical surfaces over 50mm in one application, multiple applications will be required.
- Overhead surfaces over 20mm in one application, multiple applications will be required.

## Application

### Step 1: Surface preparation:

All surfaces must be structurally sound stable, dry, clean, and free of dust, loose, flaking, friable material and free from oils, grease, form release agents, curing compounds, and any other surface contamination that may hinder adhesion. Substrate must be free from surface water and continual dampness. Concrete must be allowed to cure for at least 28 days. On any exposed Reo Bar or steel surfaces, any loose rust should be removed by blast or mechanical means.

### Step 2: Edge Profiling:

For straight lines & a professional finish, tape the borders around the area to be repaired. Reinforced cloth tape is advised.

If formwork is required, assemble at this stage, use carnauba wax as a form release, or coreflute board.

### Step 3: Priming:

Mix before use. Brush or roll material onto the surface, working it into the substrate, leaving a smooth, thin coating, without ridges or puddles.



Let EverKrete Primer dry to a tacky surface. Do not let dry for extended periods of time before application of EverKrete

EverKrete Primer is suitable for most substrates and will increase the bond between substrates and EverKrete mortar. EverKrete Primer TDS for additional information.

Coverage: Approximately 5-8m<sup>2</sup> per litre. Pot life: 10-15 minutes

For temperatures below 5dgC use a neat solution of EverKrete 102 resin and EverKrete Accelerator. Refer to EverKrete Accelerator TDS for additional information.

### Step 4: Measure dry components.

Determine how much mortar is needed for the defined work, see EverKrete coverage chart in this document. Measure

required kiln dried sand/aggregate and or EverKrete LVF or Fumed Silica and set dry components aside.

Only measure the amount of material that can be poured and trowelled within the work time. (approx. 15-20 minutes)

#### Mix ratios:

Horizontal: 3 parts kiln dried sand to 1-part catalysed EverKrete

Overhead: 0-1 parts kiln dried sand and 2-5 parts EverKrete LVF or Fumed Silica to 1-part catalysed EverKrete.

Verticals: 1-2 parts kiln dried sand and 2-3 parts EverKrete LVF or Fumed Silica to 1-part catalysed EverKrete.

Deep holes: For repairs 50-100mm deep or more, mix 2-3 parts small angular gravel, and 1-2 parts sand, with 1-part catalysed EverKrete This varies depending on the aggregate.

Self-levelling mix, use less sand. 2-2.5 parts kiln dried sand to 1-part catalysed EverKrete

Stiffer mix add more sand. 3-3.5 parts kiln dried sand to 1-part catalysed EverKrete

#### Notes:

Above ratios are a guide only, the ratios of the dry components can be varied for different applications and personal preferences. For example, to create very strong adhesive, mix 1-part EverKrete LVF or Fumed Silica into 1-part catalysed EverKrete works well.

Less sand & more EverKrete LVF or Fumed Silica makes the mixture lighter and stiffer.

### Step 5: Mix EverKrete 102.

Remove the lid of the EverKrete 102 container & pre-mix contents with a power mixer at a slow consistent speed to evenly disperse any settlement that has settled on the base of the container.

### Step 6: Measure pail.

Pour the appropriate amount of EverKrete 102 into the measuring pail.

Note before proceeding, consider: The EverKrete Mortar may be applied as soon as the EverKrete 2P Primer dry to a tacky. Do not let EverKrete 2P dry for extended periods of time before application of EverKrete, the primed area must remain clean and the EverKrete mortar must be applied on the same day.

### Step 7: Catalyse

Accurately measure the EverKrete Catalyst and add to EverKrete 102 in the mixing bucket, power mix well to evenly disperse for 30-60 seconds. Mix Ratio: 2 parts Catalyst to 100 parts EverKrete 102, the ratio can be increased to no more than 3:100 for a faster cure.

#### CAUTION:

Do not add EverKrete Catalyst & Accelerator simultaneously.

Catalyst Mix Ratio		
102	Catalyst	
Litres	2:100	3:100
0.5	10	15
1	20	30
2	40	60
3	60	90
4	80	120
6	120	180
10	200	300
18.9	378	567

Important - Do not add dry components at the same time. It is essential to thoroughly mix catalyst in before adding any dry components (sand, aggregates EverKrete LVF or Fumed Silica ).

If EverKrete Accelerator is to be used, add at this step after the resin is catalysed, power mix well to evenly disperse for 30-60 seconds. If substrate temp is below 10dg or a rapid cure is required, EverKrete accelerator can be used, refer to the EverKrete Accelerator TDS for instructions on its use.

### Step 8: Making the mortar.

Gradually add premeasured dry components (sand, aggregates EverKrete LVF or Fumed Silica ) to mixing bucket containing the catalysed EverKrete 102 whilst continuously mixing with powered mixer. Important – SAND/AGGREGATES MUST BE KILN DRIED ONLY



### Step 9: Trowel EverKrete into repair area.

DO NOT OVER-TROWEL. When the material begins to pull, finish or pat smooth with the trowel. For a neat professional finish, wipe the surface of the trowel with acetone to prevent EverKrete sticking to the trowel - Do not put acetone directly onto EverKrete mortar.

For feather edge trowel the EverKrete up to the tape and finish.



### Step 10: Remove tape & return to traffic.

After trowelling, remove taped borders Note - make sure tape is removed before EverKrete is cured. Always retain movement joints.

Normally, 45-90 minutes are needed for return to full traffic.

## Surface Overlays

For light pedestrian traffic inc balconies, walkways - A single broadcast method is normally sufficient, steps A - G.

For industrial shop floors and vehicular traffic - A double broadcast is recommended, steps A – F, then repeat steps D, E, F & then G.

- A. Shot or abrasive blasting should be used to remove all asphalt, dirt, oils, paint, laitance, weak mortar and other contaminants.
- B. Use vacuum or oil and water free air pressure to remove all dust left from cleaning. as per Step 1 & if required step 2.
- C. Apply EverKrete 2P Primer at the rate of 7m<sup>2</sup> per litre by brush or roller, as per Step 3.
- D. Mix EverKrete 102 and Catalyst, steps 5, 6, & 7
- E. Roller apply catalysed EverKrete 102, at the rate of 2-4m<sup>2</sup> per Lt. Continually back roll to remove any puddles or ridges, to attain an overall smooth finish.
- F. Working about 3 metres behind rollers, broadcast kiln dried sand to refusal, a blend of 20-50 grades. Allow to harden. Remove all loose particles
- G. Repeat steps D & E only. Remove any taped borders. Allow to harden and return to traffic.

Note: EverKrete Sealer - is used to seal the porosities and for easy cleaning and to give it a gloss finish. The slip resistant surface will still be retained.



## Expansion Joints

To repair breaks at expansion joints, a joint former can be inserted, apply EverKrete and after curing remove to expose the joint. Apply appropriate sealant to the joint. Always retain the expansion joint gap to allow for movement.



## Colour Matching

Less sand makes a greyer finish, and more sand will make a more tanned finish. By adding EverKrete LVF or Fumed Silica a greyer colour will be attained. Colour tints can also be added, consult Adheseal Technical Dpt for advice.

## Tips

Sand and aggregates to be kiln dried only.

EverKrete Primer uses heat to cure. By heating the surface before applying primer will speed curing time.

For easy trowelling use a clean shiny stainless-steel trowel. Wiping the trowel surface with acetone will assist with a neat finish.

## Materials and Equipment:

- EverKrete 102 pouring container.
- Measuring container for EverKrete catalyst.
- Bagged kiln dried sand. (20-40 mesh (coarse), or for fine feather edging, use 40-60 mesh (fine).
- Measuring containers with Increments.
- 20 Litre (or larger) mixing containers.
- Brushes and/or rollers to apply the EverKrete 2P Primer.
- Trowels. (Must be totally clean on tooling surfaces.)
- Concrete edging tools for installing dummy joints.
- Heavy-duty power mixer with wide mixing paddle or grout mixer.
- Acetone for tool clean-up.
- Container with lid, in which trowels and tools will fit flat on bottom, bathed in acetone, immediately after using.
- Cloth tape (cloth lined non-stretch))
- Leaf blower
- Rags and Adheseal citrus hand wipes.

## Products Used

- EverKrete 102.
- EverKrete Primer.
- Sand.
- EverKrete Accelerator. (optional)
- EverKrete Catalyst.
- EverKrete LVF or Fumed Silica. (optional)

## Cure Time.

Full traffic use in 45 – 90 minutes

Pot Life with 80% aggregate:

@25 dg approx. 20 min.

@40 dg approx. 12 min. Linear Shrinkage Filled 0%

Pot Life without aggregate:

@25 dg., approx. 13 min. @40 dg., approx. 7 min.

## Clean Up.

While the product is still wet, tools and spills can be efficiently cleaned with Acetone, once cured by mechanical means. Do not use coloured rages to clean up.

## Colours

EverKrete can be coloured with Pigment Pastes.

## Coverage

EverKrete Coverage, Volume calculator chart @ 3:1									
	102		Mortar	Metres squared at:					
	Litres	Aggregate	Litres	1mm	2mm	5mm	10mm	15mm	20mm
	0.5	1.5Lt	1.5	1.5	0.75	0.3	0.15	0.1	0.075
	1	3Lt	3	3	1.5	0.6	0.3	0.2	0.15
	2	Half a Bag	6	6	3	1.2	0.6	0.4	0.3
	3	9Lt	9	9	4.5	1.8	0.9	0.6	0.45
Trade Kit	4	1 Bag	12	12	6	2.4	1.2	0.8	0.6
	6	1½ Bags	18	18	9	3.6	1.8	1.2	0.9
	10	2½ bags	30	30	15	6	3	2	1.5
20Kg Pail	18.9	4bags + 8.7Lt	56.7	56.7	28.35	11.34	5.67	3.78	2.835
<b>0.6mm Sand 1Bag = 20Kg = 12Lt</b>									

Surface Overlays repairs, approx. 2-4 sq meters per litre of EverKrete 102 resin, depending on the type and porosity of the substrate, number of coats and the size of the aggregate used.

### Note:

Before application, refer to all relevant TDS's and SDS's detailed product specifications.

### Physical Properties

Type of product	Thermoset Vinyl Polymer in
Linear Shrinkage (unfilled)	1.1%
Tensile Modulus (ASTM D 790)	1,254 Mpa
Tensile Strength (ASTM D 638)	248 kg/cm <sup>2</sup>
Flexural Strength (ASTM D 790)	5.16 kg/cm <sup>2</sup>
Flexural Modulus (ASTM D 790)	2688 Mpa
Elongation % (ASTM D 638)	30%
Water Absorption (ASTM D 570)	0.64%
Compressive Strength	>70 Mpa
Hardness-Shore D (ASTM D 2240)	79
Clean up	Acetone
Storage: Cool Dry	Between +10 <sup>dg</sup> & +35 <sup>dg</sup>
Application temperature	Between +10 <sup>dg</sup> & +35 <sup>dg</sup>
Service temperature	Between - 40dg & +80dg
Recoat time @ 25 <sup>0</sup> C	2 Hours after touch dry
Final Drying time @ 25 <sup>0</sup> C & 50%	40-90 minutes (may vary with climatic conditions)
Colour	Grey. (dictated by sand colour)

### Specification:

The information contained in this document is typical but does not constitute a full specification as conditions and specific requirements may vary from project to project. The instructions should be considered as a minimum requirement. The applicator or contractor must use their skill, knowledge, and experience to carry out additional works as may be necessary to meet the requirements of the project. Specification for specific projects should be sought from the company in writing.

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### Hazard Statements

See individual product TDS's and SDS's

### FIRST AID MEASURES

See individual product TDS's and SDS's

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