



## **Mixing and Applying Instructions**

**All Products**

**September 29, 2010**

---

**784 S. Pennsylvania Ave., Winter Park, FL 32789  
407-619-6442 – Fax 407-749-0705  
[www.grailcoat.com](http://www.grailcoat.com)  
[inquiry@grailcoat.com](mailto:inquiry@grailcoat.com)**

## **CONTENTS**

<b>INTRODUCTION</b> .....	3
<b>MATERIAL AND TOOLS</b> .....	4
Material Storage .....	4
Application Tools Checklist .....	4
Tools for Texturing and Sealing .....	5
Temperature for Mixing and Application .....	5
<b>MIXING DIRECTIONS – All Products</b> .....	6
Mixing GrailCoat using the ½”, 7.0 amp drill with drywall mixing blade .....	6
<b>PREPARATION on WALLS</b> .....	8
Preparation of any Building .....	8
Preparation of OSB and Plywood .....	8
Preparation of ICF and EPS foam .....	8
Preparation of Concrete, concrete block or brick .....	9
<b>APPLICATION on WALLS</b> .....	9
First Layer – Base Coat (mesh coat) – on walls .....	9
Second Layer – on Walls .....	10
<b>Window and Door Treatments</b> .....	11
Flush Mount Windows .....	11
Recessed Windows .....	11
Doors .....	11
Skylights .....	11
<b>TEXTURE COAT – on Walls</b> .....	12
Knock-Down Texture .....	12
Spatter Finish Texture .....	12
Cure Time .....	13
Clean up .....	13
<b>APPLICATION on DECKS and ROOFS</b> .....	14
Surface Preparation for Decks and Roofs .....	14
Flashing .....	15
<b>WOOD SUBSTRATE - Decking</b> .....	16
Surface Preparation on a Wood Substrate .....	16
First Layer .....	16
Second Layer .....	16
Third Layer .....	17
<b>CONCRETE SUBSTRATE - Decking</b> .....	17
Surface Preparation on a Concrete Substrate .....	17
First Layer .....	17
Second Layer .....	18
Third Layer .....	18
<b>TEXTURE COAT and SEALING – Decking</b> .....	18
Texture for Decking .....	18
Polymer Sealer Coat .....	19
Clear Sealer Coat .....	19

## **INTRODUCTION**

Welcome and thank you for your interest in the GrailCoat family of high-performance waterproofing flexible concrete products. You will find that GrailCoat is easy to learn to mix and apply when following the instructions given below.

Although **GrailCoat** has some characteristics in common with some other products with which you may be familiar, it is different. For that reason the applicator must follow these instructions closely and not be tempted to improvise. Not following the Mixing and Applying Instructions can cause the unique, proprietary formula to be thrown off and to cause the product to not perform properly. Improper mixing or applying will void the GrailCoat Limited Warranty.

Additional resources available to assist you with your application are:

- Mixing and Applying video/slide show on our website; [www.grailcoat.com](http://www.grailcoat.com)
- Downloadable , email-able instructions in .pdf format from our web site
- Technical advice by via email: [inquiry@grailcoat.com](mailto:inquiry@grailcoat.com)
- Technical advice by telephone by calling our main number during office hours
- Mixing and Applying workshops held on a regular basis in Central Florida
- Mixing and Applying workshops held at your site.

Please do not begin your GrailCoat application until you have read this entire instruction manual and you feel confident of your understanding. We want you to have a trouble-free application and finished coating so please don't hesitate to contact us if you have any questions.

## **MATERIAL AND TOOLS**

### **Material Storage**

1. Store powder and liquid out of sun. Powder requires protection from humidity and moisture (rain).
2. Do not store the polymer at temperatures below freezing.
3. **GrailCoat** Aggregate Powder expires within **6 months** of delivery and thus should be used within that time frame.
4. **GrailCoat** Liquid Polymer expires within **2 years** of delivery so long as it is kept from repeated freezing.

### **Application Tools Checklist**

- HEAVY DUTY MIXING DRILL (7 amp with ½” chuck)
- DRYWALL (Jiffy) TYPE MIXING BLADE (square blade), or Paddle-type mortar mixer for larger jobs (Drum type Cement Mixer will not work)
- WATER HOSE - LONG
- WATER HOSE CUT-OFF NOZZLE
- WIDE BLUE PAINTER’S TAPE FOR TAPING OFF WINDOWS AND DOORS
- PLASTIC SHEETING TO MIX ON & TO CATCH OVER-SPRAY WHILE USING HOPPER GUN
- RAGS
- 3 - 4 CLEAN 5 GALLON BUCKETS TO MIX IN AND CLEAN TOOLS
- MEASURING BUCKET – TO MEASURE PROPER AMOUNT OF POLYMER
- SCISSORS TO CUT MESH
- TROWELS and other standard plastering tools (corner trowels, hawk, etc.)
- EXTENSION CORDS
- DEGREASER TO CLEAN SURFACE PRIOR TO **GRAILCOAT** APPLICATION
- MOP TO SOAK UP EXCESS WATER AFTER SURFACE CLEANING
- LIGHTS (if working at night)
- EXPANDED METAL LATH (2.5 lbs. per sq. yd.) IF COATING A WOOD DECK OR ROOF
- DUST MASK - To be worn while pouring the Aggregate Powder into the polymer for mixing

## Tools for Texturing and Sealing

- HOPPER GUN AND AIR COMPRESSOR
- TEXTURE ROLLER, if needed for the desired texture
- PAINT ROLLER (solvent friendly – with a plastic, not paper core), EXTENSION POLE AND PAN. Sealer only recommend for use on walking decks.

## Temperature for Mixing and Application

1. **GrailCoat** SuperFlex should NOT be applied at temperatures below 40 degrees Fahrenheit.
2. **GrailCoat** DuraFlex should NOT be applied at temperatures below 50 degrees Fahrenheit.
3. **GrailCoat** DuraSurf should NOT be applied at temperatures below 50 degrees Fahrenheit.
4. A special low temperature additive can be added to all products to allow mixing and application in slightly lower temperatures if requested ahead by customer.
5. Cement products are affected by temperature, the hotter the day the less fluidity and pot life.
6. In extremely hot climates the **GrailCoat** will begin to set up quickly. Adding 2-3 small ice cubes to a bucket of mixed product will help to make the product more fluid and workable. Adding ice can only be done on the first coat, NOT on the second or third coat. You can also put the mixed product bucket in a bucket of ice to keep the material cooler.
7. Keep the mixed product in the shade and out of the sun to prolong the pot life.
8. When applying to walls, note the side of the building on which the sun is shining and plan your work for the shady side of the building when possible to extend the set-up time and give you longer to work the product and to make the work more pleasant (less glare etc.).

## **MIXING DIRECTIONS – All Products**

### **Mixing GrailCoat using the ½”, 7.0 amp drill with drywall mixing blade**

1. Remove the lid on a bucket of polymer and cut a 1 to 2 inch diameter hole in the center of the lid. You will use this lid for the rest of the project so that you can mix in the color without spilling.
2. Add the full color container to a full 5-gallon pail of liquid polymer.
3. Place the mixing blade in the bucket, then securely put the lid back on the bucket passing the shaft of the mixing blade through the hole in the lid.
4. Blend the color well with the mixer. Then divide the 5-gallon bucket as described below. If color does not look right, please contact us immediately.
5. **GrailCoat SuperFlex**, divide five gallons of liquid evenly into **three** clean 5-gallon pails. (1 2/3 Gallons per Batch)
6. **GrailCoat DuraFlex**, divide five gallons of liquid evenly into **four** clean 5-gallon pails. (1 ¼ Gallons per Batch)
7. **GrailCoat DuraSurf**, divide five gallons of liquid evenly into **five** clean 5-gallon pails. (1 Gallon per Batch)
8. Mix one pail at a time by adding one bag of powder per pail of liquid, divided as instructed above (use a dust mask so that you don't inhale the powder while pouring).
9. **Slowly** add powder to the center (vortex) of the spinning mixer, stop adding powder, continue mixing then stop and check. The desired consistency is when you stop the mixer, wait 3-7 seconds and a large air bubble will appear (burping). Judge consistency, some powder may be left over due to environmental conditions. **BE SURE TO FIT IN AT LEAST 33 OF THE 35 POUNDS PER BAG OR THE PRODUCT WILL NOT HAVE THE PROPER COVERAGE PER UNIT.**
10. **Be sure to mix at least 5 minutes**, long enough so all ingredients are well blended. Wait 2 to 3 minutes then mix again for one or two minutes. **Mix as long as necessary to remove any lumps.**
11. Note: Humidity and the heat will make for less fluidity and pot life.
12. Do not leave mixed material in sun.
13. Between batches put your mixing blade in a bucket of water to keep the blades clean.
14. If you will be taking a break before using the entire batch, put a layer of plastic wrap over the surface of the GrailCoat in the bottom of the bucket and replace the lid over the bucket to slow the curing process. A sealed bucket out of the sun should retain its consistency for 3-6 hours.



**Note: Do not add water to the mix to try and thin it out. Adding too much water will ruin the product's chemistry and it will not perform as specified.**

## **PREPARATION on WALLS**

### **Preparation of any Building**

1. Parts of the building not to be coated with **GrailCoat** (windows, doors, railings, hose bibs, etc.) need to be masked off and protected.
2. **GrailCoat** that gets on surfaces not intended to be coated needs to be removed immediately while the product is still wet.
3. Gaps or cracks greater than 1/8 inch should be pre-filled with suitable filler material prior to beginning the **GrailCoat** application. The choice of filler material depends on the substrate being coated and the size of the gaps being filled.
4. Galvanized or vinyl corner bead can be used on outside or inside corners for a sharper edge.

### **Preparation of OSB and Plywood**

1. Make sure surface is free of any loose particles, such as dust, chips, and dirt.
2. Cut mesh to proper size using scissors or utility knife. Scissors are the best method for cutting the mesh.
3. Attach the mesh to the top of the wall by embedding mesh into **GrailCoat** at top of wall and working your way down.
4. Proceed to directions for Application of the First Layer.

### **Preparation of ICF and EPS foam**

1. Remove surface oxidizing and slickness using a rasp to rough up the surface. Make sure that the entire area is rasped to facilitate proper bonding of the **GrailCoat** to the surface. Chalk-line all corners, doors and windows, rasping corners back to chalk-line.
2. Clean surface of all loose particles, using best method available.
3. Fill any gaps or gouges in the ICF blocks with **GrailCoat** and allow to dry overnight before the First Layer is applied. Gaps or gouges larger than a 1/2" square should be filled with non-expanding foam and properly shaped prior to the **GrailCoat** application.
4. Pin mesh up with 6p nails, then remove the nails after applying **GrailCoat**, or attach the mesh to the top of the wall by embedding mesh into **GrailCoat** at the top of the wall and working your way down.

## Preparation of Concrete, concrete block or brick

1. Clean the concrete or brick of any dust, dirt, oil or any other contaminants. Not doing so can keep the **GrailCoat** from properly bonding to the surface.
2. Fill all joints and any other imperfections in the surface greater than 1/8 inch. It is best to fill joints with a standard polymerized concrete patcher that can be purchased at any building supply store. **GrailCoat** is not as good for filling joints because when it cures it shrinks back a bit leaving the joint somewhat visible.

**GrailCoat is a thin coating and will not hide inconsistencies in the substrate. Be sure the substrate is smooth with irregularities removed before applying the base (mesh) coat.**

## **APPLICATION on WALLS**

### **First Layer – Base Coat (mesh coat) – on walls**

1. **Always work from the top down.** In this way potential dripping material that falls will not damage a finished surface below.
2. **Cut the mesh to size and secure it to the top of the wall:** With some GrailCoat; or with nails or staples
3. This is the first coat over the mesh. Start at the top by troweling the **GrailCoat** in and over the mesh. Make sure that the **GrailCoat** is pushed through the mesh to the substrate. Do not try to conceal mesh, just fill in all the mesh squares with **GrailCoat**, insuring the substrate is full coated.
4. **CAUTION:** Make at least two-three passes with the trowel in different directions. Do not over-work the material, as it will ball-up, become sticky and hard to spread. By passing over the material more than once you will eliminate air bubbles.
5. Do not over-work the base coat; it doesn't need to be perfectly smooth since it will be covered by the second coat.
6. Cover entire wall with uniform thickness. As the product is troweled on always make sure the mesh does not wrinkle or roll up. The mesh needs to stay flat against the wall.
7. Allow the base coat to dry overnight (12 hours) before proceeding to the second coat.
8. The base coat will generally use approximately 50% of the product and take the longest to apply. (After the base coat is completed you are half way done)

---

## Second Layer – on Walls

1. The Second Coat is the final waterproofing coat for a wall application. Once a second coat is properly applied, the surface is protected and waterproofed.
2. You must decide if you wish to make the second coat your final coat, or if you want to add additional texture, such as a knock-down in a third coat.
3. **Finish as you go.** As you pass your trowel over the material 2-3 times, move to the next area and do not go back because the material begins to set up rather quickly. If you notice an area that you don't like, and you are tempted to go back and fix it, **Don't do it.** Any repairs to the finish will have to be made once this coat is dry. If you try and fix it before the finish is completely dry the material is likely to ball up and make the situation worse.
4. Apply second coat of GrailCoat over the entire surface. The second coat should completely cover the mesh so it is not visible.
5. Both applications, base and second coat, should be firmly troweled into and on top of the mesh ensuring no air bubbles or air pockets. The second coat should be applied the same way as the base coat.
6. Allow the second coat to dry completely overnight (12 hours) before applying an additional texture coat if desired.
7. Repairs to the texture can be made after the material is dry by:
  - Cutting off burs, and other texture items you don't like with the sharp edge of your trowel
  - Sanding with a vibrating hand sander
  - Applying more material.

**Note: Do not add water to the mix to try and thin it out or to make it easier trowel. Adding too much water will ruin the product's chemistry and it will not perform as specified.**

## **Window and Door Treatments**

There are two basic types of windows, **Flush Mount** and **Recessed**. The windows should be installed to the manufacturer's specifications and the **GrailCoat** should be applied in these areas as described below.

The key with any openings in the building such as windows and doors is to not let water get behind the **GrailCoat**. If water is permitted to get behind the **GrailCoat**, the bond to the substrate can be broken.

With all openings be sure that the mesh stops **one inch** before the window or door, but that the **GrailCoat** material goes all the way to the window or door. The reason for this is so that you cover the ends of the mesh completely with material so that no little fibers are sticking out. Small fibers that stick out can wick water back into the material and cause a break in the bond.

Tape off and cover with plastic any parts for the windows or doors you do not wish to have covered with **GrailCoat**.

Be sure all windows, doors and other openings are properly caulked with a high quality exterior grade siliconized latex caulk.

### **Flush Mount Windows**

1. Use Flashing Tape to tape over the metal flanges that attached the window to the wood substrate. Flashing Tape with fiber or aluminum on the back side generally works best because the **GrailCoat** will adhere to it. **GrailCoat** will not adhere to tape with a polyethylene backing.
2. Mesh to go over the flashing tape, but not all the way to the window, take the GrailCoat all the way to the window frame being sure to completely bury the mesh.

### **Recessed Windows**

Wrap the mesh and **GrailCoat** around the building and into the recessed opening. Stop the mesh 1 inch before the window so that no mesh is poking out.

### **Doors**

More like a recessed window. Mesh up and caulk really well

### **Skylights**

Skylights are very similar to surface mount windows with flanges that should be covered by flashing tape and the flashing tape then covered with **GrailCoat** with the mesh stopping 1 inch before the edge of the skylight.

## **TEXTURE COAT – on Walls**

Most any texture that can be achieved with traditional stucco can be achieved with **GrailCoat**. Two of the most popular textures are described below.

### **Knock-Down Texture**

1. **This is a two-person job.** One person to spray on the texture, and a second person to knock it down. If one person tries to do both steps the texture is likely to set up before it can be knocked down.
2. Mix the **GrailCoat** as instructed in Mixing Directions. The mix can be mixed a little looser – with a bit less powder - to enable a good flow through the hopper.
3. Every hopper/compressor set up is different. Start with about 30 p.s.i. and the largest tip opening available as a starting point. Particle size should be between ½". to ¾". across, depending on desired look.
4. Spray a test area (not on your finished building) so you are sure you have the correct particle size before spraying your building.
5. The timing of when to knock down the texture is where a bit of experience pays off. The texture should set up a bit before being knocked down, but not too much. You will notice that the texture will change sheen a bit when it is ready to be knocked down. We recommend practicing on a test board until you are comfortable that you have the timing right.
6. Cover the desired area uniformly making sure the area has plenty of material coverage. There should not be more that ¼. space without material.
7. Do not cover any area larger than an area you will be able to get back to within 15 minutes so that it can be knocked down. The material will start to set up and will become very difficult to work with.
8. Using a plastic trowel, knock down the covered area. Use an .X. or figure .8. pattern to give a nice non-directional finish.
9. Hold trowel at a 45-degree angle from the wall, paying attention not to flatten out the material into large smooth areas. Apply only enough pressure to allow for a good knock down finish.
10. Make sure you have a clean damp towel on hand to clean the blade periodically as build up occurs.

### **Spatter Finish Texture**

1. Mix the **GrailCoat** the same as for the knock down finish application.
2. Apply over the second coat, using a pressure setting between 35-40 p.s.i. as a starting point. The particle size should be between 1/8. to 3/16.. Apply liberally over desired area to be covered, with no more that 1/8" space being uncovered.

UPON APPLYING ALL THREE COATS OF GrailCoat IT SHOULD BE APPROXIMATELY 3 MM (1/8.) THICK. GrailCoat IS A THIN COAT SYSTEM THAT DOES NOT HIDE INCONSISTENCY IN A SUBSTRATE. MAKE SURE ALL SUBSTRATE INCONSISTENCIES ARE TAKEN CARE OF BEFORE APPLYING GrailCoat.

## **Cure Time**

1. **GrailCoat** cures quickly. Mix in batches that can be applied within 30-60 minutes of mixing. Cure time varies based on temperature. Dry time needs to be a minimum of 12 hours before applying next coat.

## **Clean up**

1. Make sure all tools, pumps, and hoppers are cleaned thoroughly with water removing all **GrailCoat**. The **GrailCoat** needs to be removed before it sets up to assure easy clean up.

2. A good tip when using a hopper is to always have a 5-gallon pail of water to set the hopper gun into when you have down time to keep the material from setting up in the tip.

## **APPLICATION on DECKS and ROOFS**

There are two differences between a decking/roofing application and a wall application.

1. A wall application requires two complete coats for waterproofing and protection and uses standard GrailCoat alkaline resistant mesh.
2. A deck application requires three complete coats for protection and uses expanded metal lath instead of standard mesh on a wood deck.
3. Option: When GrailCoat is used as an **underlayment** (waterproofing below a tile or stone deck) two complete coats are specified.

### **Surface Preparation for Decks and Roofs**

1. **Slope** – All decks should slope away from the building. We recommend ½ inch for every 4 feet. This reduces puddling and encourages proper run off.
2. **Doors** – All access to the deck should be no less than 4” above the deck. This insures that blowing water will not go in the door. If blowing water enters the house and leaks down, your deck may be accused of leaking. *If a builder already has the door framed below this line, include an exclusion in your contract.*

## Flashing

**Metal flashing is required to be installed on the edges of all decks/roofs (drip edge), and at any point where the deck/roof changes directions at an angle. For example, use metal flashing where the deck meets a wall, or in the valley between two roof lines.**

1. All flashings will be set in a bed of **GrailCoat**. This helps insure the flashing will not leak as well as securing the flashing.
2. Galvanized wall flashing (6 inch x 6 inch, 90 degree) is set in a bed of **GrailCoat**. The **GrailCoat** is to be applied at least 4 inches up the wall and 6 inches on the deck from the edge of the flashing.
3. Nail the top of the flashing every 2 inches and nail the base of the flashing on the deck every 6 inches. Use a quality exterior caulk to seal any joints in the flashing, i.e. at corners and where two pieces of flashing overlap. Caulk liberally and press firmly until the caulk squeezes out at the top, bottom and lap joint. Avoid nailing too close to the joint in the flashing.
4. **Drip edge** (edge metal) is used to provide a finished look for the outer edge of the deck. Colored metals may be used or unfinished galvanized or paint grip is acceptable. A 90 degree metal with a ¼ inch kicker on the bottom is standard. At least 3 inches on the deck and bent down no less than 2 ½ inches on the face is specified. Set the bed of **GrailCoat** on the deck only and to extend out 2 inches past the edge metal on the deck. Nail edge metals every 6 inches.

**Note: Edge metals are used to trim out the deck and to seal off the outer face of the deck. This may be stucco, brick, or siding and each must be in place or the measurement to the outside edge need be known in order to install the edge metal. Consider all of this when determining the size of the edge metal to be installed.**

5. **KICK-OUTS**. Many times flashings are installed yet not finished correctly. One of the most common mistakes is not installing a Kick-Out.. A Kick-Out is simply a small 4 inch, 45 to 90 degree turn in the metal located at the end of the wall flashing where the deck ends. This keeps the water from entering behind the wall and turns the flow of water towards the outer edge of the deck.
6. **Doorframes** should have **Door Pans** installed before the actual door is set. This is the same 6. x 6. 90 degree galvanized metal flashing. The pan is installed 6 inches up each doorjamb and across the bottom. The 90-degree will sit across the doorframe and bend around the outer wall. The door pan will sit over the wall flashing to properly shed water. Caulk the cut corners and nail on the upper sides of the door pan only, left and right jamb. Do not nail through the wall metal.
7. Instruct all trades that will be installing the finished exterior over the flashings to not nail below 4 inch above the deck. Siding can be nailed at the top, and stucco paper, mesh or channel can lap over yet be nailed above the 4 inch line.

---

## **WOOD SUBSTRATE - Decking**

### **Surface Preparation on a Wood Substrate**

1. Make sure surface is free of any loose particles, such as, sawdust, dirt, etc., and free of any grease, oil, or other contaminants.
2. Wood decking should be a minimum of  $\frac{3}{4}$  inch thick and securely nailed 16 inch on center. Use regular plywood, OSB or Advan Tech. Do not use pressure treated plywood unless it has dried out.
3. Check for damage as a result of exposure to the elements. OSB will swell and plywood (CDX) will de-laminate when exposed to moisture. Check to insure that any wood that has gotten wet is completely dry and no moisture is trapped inside. Any trapped moisture may eventually heat up and start the wood swelling or de-laminating after the deck product has been installed. This movement of the substrate will transfer to the surface of the deck, or worse, will crack the deck product from underneath.
4. Fill any large gaps or cracks with GrailCoat. Once dry, level filled areas by scraping with a trowel. This will prevent the filled area from showing through on the finished deck.
5. Install metal flashing as specified in these instructions before installing the metal lath.

### **First Layer**

1. Wood decks are covered with galvanized expanded (diamond metal lath (2.50)) the sheets are stapled or nailed to the substrate. Be sure to butt the sheets of lath together, leaving no gaps between sheets. Make sure all joints in the substrate are covered with lath. Do not allow a joint in the lath to be directly above a joint in the substrate. The metal lath needs to overlap the flashing at least an two inches.
2. After the lath is attached to the entire deck embed with a first coat of **GrailCoat DuraFlex**. There is no color needed for this coat. Trowel the material to be sure the lath is filled and the **GrailCoat** makes contact with the substrate. The metal lath is a good thickness gauge, do not allow any material to be above the metal lath. Allow the first layer to dry completely before proceeding to second layer. It is good to allow the deck to dry overnight.

### **Second Layer**

1. The second layer must be installed using color. Begin at the same point you previously began but this time install the **GrailCoat** in the opposite direction across the mesh lines. This will help to insure a more even application and help to eliminate patterns at lath joints.

*There is a minimal amount of shrinkage as the first and second coats dry. If the diamond pattern of the lath is visible after the second coat has dried follow the directions below for a third coat. The third coat is a skim coat to hide the diamond pattern. The texture coat will not hide the ghosting diamond pattern. If no diamond pattern is visible proceed to the texture coat and sealing step on the next page.*

## **Third Layer**

1. The third layer must be installed with the color. Inspect the second layer surface for slight trowel imperfections. These may be scraped off with the edge of the trowel. The smoother the previous surface, the smoother the final surface will be. Install the third layer in the opposite direction from the second.
2. You may sand the surface of the third layer if an inconsistency exists. Note that a belt sander may leave a dark rubber mark on this area so a vibrating hand sander is recommended.

**Texture Coat and Sealing** is the final step. Proceed to Texture Coat and Sealing instructions.

## **CONCRETE SUBSTRATE - Decking**

### **Surface Preparation on a Concrete Substrate**

1. Make sure surface is free of any loose particles, such as, sawdust, dirt, etc., and free of any grease, oil, or other contaminants.
2. Install metal flashing as specified in these instructions before putting down the **GrailCoat** fiberglass alkali-resistant mesh.
3. A slightly damp surface (no puddles) will actually help the **GrailCoat** adhere to the concrete substrate. After you have determined you have a stable substrate, fill any gaps or cracks greater than 1/8 inch with **GrailCoat**. Filling will prevent the area from showing through on the finished deck. After filling gaps, allow the filler material to dry for 12 hours before applying the first layer (mesh coat).

### **First Layer**

1. Roll out mesh beginning on the outer edge and determine where you should begin and end. Leave the mesh about 1 inch from the wall or edge. This insures that no mesh will stick out of the **GrailCoat** creating a potential breach in the seal.
2. The first layer of **GrailCoat** may be installed without color. Properly mix the **GrailCoat** and begin by pouring a small amount onto the mesh, press firmly into the mesh with a

trowel. The mesh is a very good guide to determine the thickness of the first coat and will show through the first layer of **GrailCoat**. Continue pouring and troweling the **GrailCoat** into the exposed mesh. When applying **GrailCoat** to the mesh be sure to leave about 2 inches of the mesh exposed where there will be a mesh overlap. This is your lap line for the next course. Your second course of mesh will lap over to the **GrailCoat** already installed. Allow the first layer to dry completely (dry to the touch is sufficient) before proceeding to second layer.

**Note: Leaving approximately 2 inches of mesh exposed will allow the abutting course of mesh to blend in. Installing mesh over a previously coated mesh area will cause a slight hump at the mesh overlap. The resulting hump will become more pronounced as the application continues.**

## **Second Layer**

The second layer must be installed using color. Begin at the same point you previously began. This time install the **GrailCoat** in the opposite direction across the mesh lines. This will help to insure a more even application and help to eliminate patterns at lap joints. Allow to dry completely before installing the third layer.

**Note: If other trades persons will be working on this deck doing their work, you may wish to wait until they are finished before applying the third coat.**

## **Third Layer**

The third layer must also be installed using color. Texture Coat and Sealing is the final step, follow the instructions for Texture Coat and Sealing.

# ***TEXTURE COAT and SEALING – Decking***

## **Texture for Decking**

1. The Knock Down texture is most popular. This texture is achieved by applying the **GrailCoat** using a spray hopper. Mix the **GrailCoat** a bit more liquid, using less powder, for this step.
2. Using the largest fitting, apply a generous amount in area about 4feet by 6 feet (the area should be no larger than you can reach across). Using your trowel, knock the texture down across the entire area. Wipe the trowel clean using water, leaving it wet. Again trowel across the texture to further smooth out the texture surface. Repeat, applying the spray over the previous texture edge. The wet step will blend the two areas together. Continue until entire deck is textured.
3. Once texture is dry, any railings to be installed should be secured. The screw holes for the feet should be caulked liberally as they are secured to the deck.

## **Polymer Sealer Coat**

1. DuraFlex polymer is used to help insure a uniform color across the entire deck surface and to seal in any salts that may leach to the surface and alter the color of the deck. Mix the polymer as follows: **5 Gallon pail of DuraFlex Polymer and 1 Color Pack.** Thoroughly mix color into DuraFlex Polymer. This is the same technique used at the very beginning to add color to any five gallon pail of polymer. If you have tinted polymer left over you can use that instead of coloring an entirely new five gallon bucket.
2. Use a roller to apply the sealer. Use rollers with a plastic tube core, the paper core may fail.
3. Use a small brush or roller to detail around the walls and feet of railings. Roll out the coating consistently until entire deck is covered. Note that most roller lines will disappear when the coating dries, the color may darken as it dries.

## **Clear Sealer Coat**

GrailCoat clear sealer is the last coat to be applied. The clear sealer goes over the polymer sealer coat. Apply the clear sealer with a roller directly from the can. The sealer is not a waterproofing step, but a step to make the deck easier to clean.

GrailCoat clear sealer should be reapplied once per year.

***The deck must be viewed as a whole. As you begin each step, look at the deck in its entirety, not just the area directly in front of you. The deck is not a series of steps but the total of all of them.***

## **TROUBLESHOOTING**

Problem	Possible Causes	Remedy
Material setting up to quickly	<ol style="list-style-type: none"> <li>1. Outside air is hot &amp; dry</li>   <li>2. Material is not immediately applied after being mixed</li>   <li>3. Material may have too much powder in the mix.</li> </ol>	<ul style="list-style-type: none"> <li>• Keep the material in the shade</li> <li>• Place the mixed bucket inside a bucket 1/3 filled with ice</li> <li>• Work on the side of the building not in the sun as much as possible</li> <li>• Add <b>up to</b> 8 oz. of ICE to a batch.</li> <li>• Do not mix material until you are ready to apply. Plan on finishing each batch within 30 minutes of mixing.</li> <li>• You may leave out <u>up to 2 pounds</u> of the bag per batch to make the mix a bit more loose.</li> <li>• <b>DO NOT ADD WATER</b> or ice <u>in excess of the 8 oz. mentioned above</u> as this will void the warranty by changing the chemical composition of the product</li> </ul>
White spots show after the material is applied	<ol style="list-style-type: none"> <li>1. Not being mixed long enough</li>   <li>2. Aggregate powder has expired (more than 6 months old) and has taken on humidity</li>   <li>3. Aggregate powder has been left out in the rain</li> </ol>	<ul style="list-style-type: none"> <li>• Be sure to mix the material for at least 5 minutes. <b>Mix long enough so that no lumps are visible in the mix</b></li> <li>• Call the GrailCoat office and order more aggregate powder</li> <li>• Call the GrailCoat office and order more aggregate powder</li> </ul>
Material is soft after 24 hours	<ol style="list-style-type: none"> <li>1. Water hit the material before it set up long enough</li>   <li>2. Material was applied too thickly</li> </ol>	<ul style="list-style-type: none"> <li>• Scrape off all the soft material down to the mesh with a trowel and properly dispose of it. Wait until the remaining material has completely cured. Re-apply the material.</li> </ul>

## **RETURN POLICY**

All returns must be done within 90 days of invoice and require a Return Materials Authorization (RMA) from GrailCoat WorldWide, LLC All returns are subject to a 25% restocking fee. Credit will be posted to the customer account.



---

You may request a list of “Ancillary Products” sold by other companies to assist you in having the proper caulk, trowels, fillers and other items you will need to complete you job.

We hope you have found these Application Instructions to be helpful. Our primary concern is that you have a successful project that will look good and perform well for many years to come. Please don't hesitate to call on us if you have any questions that we may be able to clarify for you.

[www.grailcoat.com](http://www.grailcoat.com)

