BASIC INSTRUCTIONS

SANI-TRED Products And Their Containers:

1. **LRB (LIQUID RUBBER BASE):** 5 gallon pail and 1 gallon pail with blue label, or 1 quart can, and 1/2 pint can marked LRB
2. **LRB Catalyst:** 2 oz LRB Catalyst per 5 gal pail of LRB and .4 oz LRB Catalyst per 1 gal pail of LRB when not using TAV
3. **T.A.V. (THICKENING ACTIVATOR):** 5 gallon pail, 1 gallon pails, 1 qt. can, 1 pint can) No LRB Catalyst needed when mixing LRB with TAV
4. **PERMAFLEX:** 5 gallon pail and 1 gallon pail come with green label, or 1 quart can and 1/2 pint can marked PermaFlex
5. **PERMAFLEX Catalyst for 5 gal. pails:** 1/2 pint can marked PERMAFLEX Catalyst
6. **PERMAFLEX Accelerator for 5 gal. pails:** 1 quart can marked PERMAFLEX Accelerator
7. **PERMAFLEX Catalyst and Accelerator for 1 gal. pails:** bottles labeled "PERMAFLEX ACCELERATOR and CATALYST"
8. **PERMAFLEX Catalyst and Accelerator for 1 qt. can:** 2 oz. bottle labeled "PERMAFLEX ACCELERATOR and CATALYST"

KEEP MATERIALS ABOVE 70° AT LEAST 24 HOURS BEFORE USE. THE MATERIALS WILL BE TOO THICK TO WORK WITH IF NOT STORED ABOVE 70°. SANI-TRED MATERIALS MAY BE SUBJECTED TO EXTREMELY COLD TEMPERATURES DURING SHIPPING, FOR STORING BEFORE USE, AFTER INSTALLATION AND DURING CURING WITHOUT ILL EFFECTS.

Wear gloves & work clothes when applying the products. Cleaning your skin before the Sani-Tred product cures, you may scrub using dish soap or Isopropyl alcohol. In extreme cases, you may use Methyl Alcohol, Xylene or Acetone.

Condensed Basic Application Options

(See Detailed Instructions before application)

Start a section that you can complete in the same day; If the ENTIRE Sani-Tred application cannot be completed in 1 day, you must start a section and complete that in that day. It is not suggested to apply 1 coat, waiting a day or so, and applying an additional coat

Option 1:

1) **Substrate Prep**- Prepare the substrate. Remove any loose crumbly substrate, make sure the substrate is clean, dry, and free of any previous applied products. See Technical Information for Surface Substrate Preparation instructions. If oily spots are present see Technical Information for Oil or Grease Contamination.
2) **Prime Cracks**- Prime cracks, joints, seams, holes, and anything that will require patching with 1 coat of PermaFlex (240 sq ft per gal); as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application.
3) **Patch Cracks**- Patch and profile any joints, seams, cracks, holes, and rough areas using either LRB and/or LRB/TAV mixture. Wall/floor junctions require a 1" diameter bead of LRB/TAV mixture; as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application.
4) **Prime Entire Surface**- Prime the **entire surface** with 1 coat of *PermaFlex* (240 sq ft per gal); as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application.
5) **Topcoat Entire Surface**- Topcoat the **entire surface** using 1 coat of PermaFlex (240 sq ft per gal).

Option 2:

1) **Prep**- Prepare the substrate. Remove any loose crumbly substrate, make sure the substrate is clean, dry, and free of any previous applied products. See Technical Information for Different Surface Substrate Preparations. If oily spots are present see Technical Information for Oil or Grease Contamination.
2) **Prime**- Prime the substrate with 1 coat of PermaFlex (240 sq ft per gal); as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application
3) **Patch**- Patch and profile any joints, seams, cracks, holes, and rough areas using LRB and/or LRB/TAV mixture. Wall/floor junctions require a 1" diameter bead of LRB/TAV mixture; as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application.
4) **Topcoat**- Topcoat using 1 coat PermaFlex (240 sq ft per gal).

DETAILED BASIC APPLICATION INSTRUCTIONS

Incredible Products LLC does not have control over the end use and application of its products so the applicator must assume the responsibility of proper substrate preparation, detail work, and application.

Step #1. Substrate Preparation:

- To have consistent finished surfaces, high spots should first be knocked down.
- Remove any loose crumbly substrate, make sure the substrate is clean, dry, and free of any previous applied products.

Note: Incredible Products LLC offers "Off The Wall Coating Remover" which is approved, non-hazardous, non-toxic, water soluble, low odor, and will not burn your skin. Off The Wall Coating Remover will remove most paints, coatings, sealers, etc...

See Technical Information for Specific Substrate Preparations.

We do NOT recommend using a wire wheel.

After proper preparation-cleaning, etc... you can begin the Sani-Tred application. Concrete should be left to cure for at least 28 days before beginning the Sani-Tred application. Concrete can be artificially cured or dried. If water, dampness, or moisture is present See Technical Information for How To Artificially Dry Wet Concrete if the substrate is concrete or other non-flammable substrates. Newly poured concrete floors must be acid etched and neutralized to remove latencies from the surface.

Prep/Cleaning Update

It has come to our attention that some SANI-TRED customers may be using cleaning solutions containing chlorine bleach or other corrosive chemicals for disinfectant cleaning. It is strongly advised that **NO CHLORINE/BLEACH SHOULD BE USED** as a cleaner or disinfectant to prep or clean any SANI-TRED surface. Chlorine chemically attacks rubber and is potentially harmful to it over extended periods. Some commonly used phenol disinfectants are highly corrosive to fittings, pen materials, and equipment and will leave a residual oily film on your SANI-TRED floor that will make it slippery, especially when wet. It is advised that a modern neutral disinfectant cleaner be used to clean and sanitize. Modern neutral cleaner disinfectants are highly recommended by most product manufacturers today.

DO NOT ATTEMPT TO APPLY ANY MATERIAL, (OF ANY TYPE), ON ANY SUBSTRATE THAT SHOWS SIGNS OF WATER OR SURFACE CONTAMINATION. THE SOURCE OF CONTAMINATION MUST BE REMOVED FROM THE SURFACE FIRST IN ORDER TO ACHIEVE A PERMANENT BOND TO THE ORIGINAL SUBSTRATE

Step #2. Mixing PermaFlex:

- The base coat has been calculated and provided at a rate of 240 sq. ft. per gallon (6.7 mils). Do not apply heavier or lighter than suggested. PermaFlex is not to be used to fill cracks, holes, or smooth out rough areas.
- Use a lid lifter to remove the pail lid and mix any settled solids or pigments using a heavy duty 1/2" drill and large mixing paddle at slow speed. PermaFlex will cure tack free in 4 hours or less at normal temperatures (70 degrees F), longer in cooler temperatures.

- Don't Worry- PermaFlex will not completely solidify in your pail during your application (unlike LRB). After Catalyzed and Accelerated it can only form a skin on the surface (needing removed) and/or thicken up a bit if application is long delayed. Just thin it down again and you're ready for application. See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions (if thinning is desired)
- Mix PermaFlex, Catalyst, and Accelerator at slow speed for 30 to 90 seconds or until fully blended.

A. 5 gallons of PermaFlex requires 1/2 pint can PermaFlex Catalyst and 1 quart PermaFlex Accelerator

B. 1 gallon of PermaFlex requires a bottle of "PermaFlex Catalyst and Accelerator mixture"

C. 1 quart of PermaFlex requires 2 oz bottle of "PermaFlex Catalyst and Accelerator mixture"

- If you want to mix only 1/2 of the container of PermaFlex at a time, use 1/2 the amount of PermaFlex Catalyst and Accelerator
- It is recommended to only catalyze and accelerate what you will be applying within a reasonable amount of time.
- **IT IS RECOMMENDED TO THIN PERMAFLEX** with Xylene (in states where allowed), Odorless Mineral Spirits (pure/clear) or Acetone 15-25%. This would be 19-32 ounces per gallon by volume (available at most Sherwin Williams, hardware stores, paint stores). See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions. Due to EPA regulations some thinning agents had to be removed from PermaFlex therefore it has a higher viscosity and requires that the customer thin PermaFlex.
- **OPTIONAL ~ ADJUSTING CURE TIME:** Speeding The Cure Time 'Double Accelerating' PermaFlex - One can mix up to twice the amount of 'PermaFlex Accelerator' into the PermaFlex to make the PermaFlex cure quicker. This is typically done when the temperature is cold, when the humidity is low, or when you just want to make it cure faster. When you double accelerate the PermaFlex it should also be thinned. See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions. Apply a test spot to be able to better predict the cure time on your actual application.

Step #3. Applying (Prime Coat) Of PermaFlex:

Water or dampness should not be present at the time of application.

The base coat has been calculated and provided at a rate of 6.5 mils or 240 sq. ft. per gallon. Do not apply heavier or lighter than suggested. PermaFlex is not to be used to fill cracks, holes, etc...

Walls:

Start rolling at the top of the wall working your way down to the floor. Use 4 long, rapid strokes repeatedly over each area to evenly distribute the PermaFlex and eliminate runs, tool marks and thick spots. Distribute material evenly as quickly as possible without delay. If your initial application is distributed evenly and is flat and smooth looking on the surface, there is no need to roll the prime coat any longer. Repeat this procedure - spreading and rolling fresh batches of PermaFlex next to previous batches - until the entire area has been spread. Aesthetically, it is best to complete walls first so that any drips or spills are covered when applying to the floors.

Floor:

After pouring mixed PermaFlex from the mixing pail, turn pail upside down on the floor to drain excess PermaFlex left in the pail, or scrape remaining material from inside the pail.

Immediately after pouring material over the predetermined area, quickly spread the liquid puddles with a flat squeegee and use a long-handled medium nap paint roller to evenly distribute the PermaFlex.

Use 4 long, rapid strokes repeatedly over each area to evenly distribute the PermaFlex and eliminate tool marks and thick spots. Distribute material evenly as quickly as possible without delay. If your initial application is distributed evenly and is flat and smooth looking on the surface, there is no need to roll the base coat any longer.

Repeat this procedure - spreading and rolling fresh batches of PermaFlex next to previous batches - until the entire area has been spread. The surface will cure tack free and ready for light foot traffic in approx. four hours or less at normal temperatures, overnight at cold temperatures near or below freezing.

- If the ENTIRE Sani-Tred application can not be completed in 1 day, you must start a section and complete that section in that day. It is not suggested to apply 1 coat, waiting a day or so, and applying an additional coat. See Condensed Basic Application Explanation for Option 1 and 2 (Page 1) and Oily Film Causing Coat Separation.

Sani-Tred Rate Of Use Charts - Found online at: http://www.sanitred.com/rateofuse.htm

- When applying PermaFlex, one can wear "golf spikes" to enable the applicator to literally walk on to the wet coating during the application without leaving foot steps in the coating. This is very helpful especially on large floor applications.
- The most important tool is the roller cover especially when applying a smooth system. "High quality roller covers" are always suggested, more expensive, but worth it! If you use cheap roller covers when applying a smooth system the "nap" of the roller may tend to pull out leaving behind pieces of the nap in the coating.
- Don't Worry- PermaFlex will not completely solidify in your pail during your application (unlike LRB). After Catalyzed and Accelerated it can only form a skin on the surface (needing removed) and/or thicken up a bit if application is long delayed. Just thin it down again and you're ready for application. See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions (if thinning is desired).
- Be sure to watch your consumption rate! Don't over apply or you'll run out of PermaFlex before completion and surface bubbles may occur from the trapped air due to the deep penetrating action of the PermaFlex displacing air. The trapped air can't escape through the heavy coating before it cures.
- There are no specified waiting periods between coats or steps throughout the Sani-Tred application; as soon as the coat or step has become cured enough to walk on or continue with the application (even if product is still tacky you may continue with your application); you can immediately proceed with the next step. All Sani-Tred products are completely compatible and will molecularly weld at ANY stage within their curing process.

Oily Film Causing Coat Separation

An oily film may occur on the cured surface of PermaFlex and LRB, when left to cure overnight, depending on temperature and humidity. The oily film can cause a second coat/application of

PermaFlex or LRB to "separate", meaning it does not cover the previous coat completely or bond.

1. Thoroughly wash, pressure wash, or mop the surface using a detergent dish soap & water or T.S.P & water (Tri Sodium Phosphate). Thoroughly rinse and dry. Do not just wipe or mop this oily film around, you are trying to remove this oily film from the surface.
2. Thoroughly wipe the surface using Xylene or Acetone before applying another coat. Do not use a single rag with Xylene or acetone and just wipe this oily film around, nothing will be achieved that way. You will need multiple rags as you are trying to remove this oily film, not redeposit it elsewhere.

To avoid this situation entirely start early. Start a section that you can complete in the same day before the oily film occurs. Another section can be started and completed any day in the future. Continue with the application as soon as the previous coat or step has become cured enough to walk on or tacky/stiff enough to continue.

Step #4. Patching and/or Leveling with LRB and/or LRB/TAV Mixture (Liquid Rubber Base, Thickening Activator)

LRB is an extremely versatile liquid; once activated it will cure throughout its entire volume in 4 hrs or less (at normal temperatures). The viscosity of LRB can be adjusted from a fluid to very thick mixture by mixing it with TAV (Thickening Activator). See Technical Information for LRB and TAV Instructions and for Mixing LRB to be used as membrane, self-level a low spot or flood coat.

Remove lid of the container of LRB (Liquid Rubber Base). Thoroughly mix the contents of the pail of LRB first before pouring any out.

Step #5. Mixing PermaFlex for the Final Surface Coat

Note: Check to make sure there are no other areas that may need to be patched or filled. Patching should be completed before continuing with the next step.

- This coat has been calculated and provided at a rate of 240 sq. ft. per gallon (6.7 mils). Do not apply heavier or lighter than suggested. PermaFlex is not to be used to fill cracks, holes, etc...
- Use a lid lifter to remove the pail lid and mix any settled solids or pigments using a heavy duty 1/2" drill and large mixing paddle.
- PermaFlex: Mix PermaFlex, Catalyst, and Accelerator at slow speed for 30 to 90 seconds or until fully blended.

A. 5 gallons of PermaFlex requires 1/2 pint can PermaFlex Catalyst and 1 quart PermaFlex Accelerator

B. 1 gallon of PermaFlex requires bottle of "PermaFlex Catalyst and Accelerator mixture"

C. 1 quart of PermaFlex requires 2 oz bottle of "PermaFlex Catalyst and Accelerator mixture"

- PermaFlex will cure tack free in 4 hours or less at normal temperatures (70 degrees F), longer in cooler temperatures.
- If you want to mix only 1/2 of the container of PermaFlex at a time, use 1/2 the amount of PermaFlex Catalyst and/or Accelerator

- It is recommended to only activate what PermaFlex you will be applying within a conservative amount of time.
- See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions (if thinning is desired). Thinning the PermaFlex will make it easier to roll though may take a little longer to cure.
- **OPTIONAL ~ ADJUSTING CURE TIME:** Speeding The Cure Time 'Double Accelerating' PermaFlex - One can mix up to twice the amount of 'PermaFlex Accelerator' into the PermaFlex to make the PermaFlex cure quicker. This is typically done when the temperature is cooler, when the humidity is low, or when you just want to make it cure faster. When you double accelerate the PermaFlex it can also be thinned. See Technical Information for PermaFlex, LRB Thinning and Clean-up Instructions. When adjusting the cure time, it is best to apply a test spot to be able to better predict the cure time on your actual application. Do not experiment in the field.

Step #6. Applying the Final Top Coat of PermaFlex

Water or dampness should not be present at the time of application.

The top coat has been calculated and provided at a rate of 6.5 mils or 240 sq. ft. per gallon. Do not apply heavier or lighter than suggested. PermaFlex is not to be used to fill cracks, holes, or smooth out rough areas.

Walls:

Start rolling at the top of the wall working your way down to the floor. Use 4 long, rapid strokes repeatedly over each area to evenly distribute the PermaFlex and eliminate runs, tool marks and thick spots. Distribute material evenly as quickly as possible without delay. If your initial application is distributed evenly and is flat and smooth looking on the surface, there is no need to roll the prime coat any longer. Repeat this procedure - spreading and rolling fresh batches of PermaFlex next to previous batches - until the entire area has been spread. Aesthetically, it is best to complete walls first so that any drips or spills are covered when applying to the floors.

Floor:

After pouring mixed PermaFlex from the mixing pail, turn pail upside down on the floor to drain excess PermaFlex left in the pail, or scrape remaining material from inside the pail. Immediately after pouring material over the predetermined area, quickly spread the liquid puddles with a flat squeegee and use a long-handled medium nap paint roller to evenly distribute the PermaFlex. Use 4 long, rapid strokes repeatedly over each area to evenly distribute the PermaFlex and eliminate tool marks and thick spots. Distribute material evenly as quickly as possible without delay. If your initial application is distributed evenly and is flat and smooth looking on the surface, there is no need to roll the base coat any longer. Repeat this procedure - spreading and rolling fresh batches of PermaFlex next to previous batches - until the entire area has been spread. The surface will cure tack free and ready for light foot traffic in approx. four hours or less at normal temperatures, overnight at cold temperatures near or below freezing.

ALLOW 7-10 DAYS FULL WORKING STRENGTH BEFORE HEAVY ABUSE SUCH AS HEAVY MACHINERY TRAFFIC OR INSTALLING HEAVY FURNITURE AND FIXTURES ON THE NEW FLOOR.

TECHNICAL INFORMATION

Prep/Cleaning Update

It has come to our attention that some SANI-TRED customers may be using cleaning solutions containing chlorine bleach or other corrosive chemicals for disinfectant cleaning. It is strongly advised that **NO CHLORINE/BLEACH SHOULD BE USED** as a cleaner or disinfectant to prep or clean any SANI-TRED surface. Chlorine chemically attacks rubber and is potentially harmful to it over extended periods. Some commonly used phenol disinfectants are highly corrosive to fittings, pen materials, and equipment and will leave a residual oily film on your SANI-TRED floor that will make it slippery, especially when wet. It is advised that a modern neutral disinfectant cleaner be used to clean and sanitize. Modern neutral cleaner disinfectants are highly recommended by most product manufacturers today.

SAFETY Information

- **CONFINED SPACES** - When in a confined space, basement, closed room, indoor application, etc... even with proper ventilation, a carbon filter mask or full breathing apparatus is still suggested especially when thinning with xylene. You do not want to breathe anything other than clean air.
- **Proper Ventilation** indoors is achieved best by opening 1 door or window on one end, 1 door or window open on an opposite end, and placing a blower, fan, etc... in one of the doors or windows. This will draw in fresh air to create "flow through ventilation".
- **CAUTION** - Using gas torches such as propane or butane can allow heavier than air leaking gasses to accumulate in low points of a confined space, such as a basement, and can create a dangerous fire or explosion hazard. Be careful using a torch in your basement and provide plenty of outdoor flow-through ventilation with a large powerful fan or blower. Check to be sure you do not have any utility gas leaks in your basement.

Different Substrate Preparations

Plywood (Wood) Preparation

Plywood should be dry, free from large amounts of loose dirt or dust, and free from oils or other bond-breakers such as paints, sealers, or any other previously applied products. Some prefer (not necessary) to first sand the wood. Plywood joints must be sealed with a 3/4" bead as shown in the drawing in order to permanently seal them. Plywood seams must always be primed before they are patched with LRB or LRB/TAV mixture. Allow some time for the LRB or LRB/TAV mixture to cure enough to continue with the Sani-Tred application.

In some cases very dry or old wood/plywood may be EXTREMELY absorbent (based on a test area). In such a case one would apply 1 coat of PermaFlex which will saturate into the wood and seal it from further saturation with the Sani-Tred application.

Smooth System On Plywood

Option 1:

1) Prepare the substrate. Remove any loose crumbly substrate, make sure the substrate is clean, dry, and free of any previous applied products. See Technical Information for

Different Surface Substrate Preparations. If oily spots are present see Technical Information for Oil or Grease Contamination.

2) Prime the entire surface with 1 coat of PermaFlex (240 sq ft per gal).
3) Patch and profile any joints, seams, cracks, holes, and rough areas using LRB and/or LRB/TAV mixture.
4) (plywood) Apply LRB membrane at 40 sq ft per gal. for lifetime seal; less can be applied (optional).
5) Topcoat using 1 coat PermaFlex (240 sq ft per gal).

Option 2:

1) Prepare the substrate. Remove any loose crumbly substrate, make sure the substrate is clean, dry, and free of any previous applied products. See Technical Information for Surface Substrate Preparation instructions. If oily spots are present see Technical Information for Oil or Grease Contamination.
2) Prime cracks, joints, seams, holes, and anything that will require patching with 1 coat of PermaFlex (240 sq ft per gal).
3) Patch and profile any joints, seams, cracks, holes, and rough areas using either LRB and/or LRB/TAV mixture.
4) Prime the entire surface with 1 coat of PermaFlex (240 sq ft per gal).
5) (plywood) Apply LRB membrane at 40 sq ft per gal. for lifetime seal; less can be applied (optional).
6) Topcoat the entire surface using 1 coat of PermaFlex (240 sq ft per gal).

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow the product its full working strength) before pulling at raw edges of the test patch.

Steel, Stainless Steel, Cast Iron Preparation

- **Steel** - Rust does not need be removed to "shiny metal". Only loose flaking rust needs removed either by pressure washing, lightly sand-blasting, etc..... All bond breakers such as paints or any other previously applied products and oils need to be removed to ensure a permanent bond. If oily spots are present, see Technical Information for Oil or Grease Contamination.
- **Cast Iron** - Often has a crude black coating on it; it will need to be removed for a permanent bond. Sandblasting is the most effective solution. In order to ensure all contamination is removed, Cast Iron should be brought down to "shiny metal".
- **Stainless Steel** - Should always be sand blasted. This is done not only to make sure the substrate is clean and free of any previous applied products, but to also to create a rough profile to ensure the most durable and permanent adhesion.

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow the product its full working strength) before pulling at raw edges of the test patch.

Aluminum and Galvanized Steel Preparation

All substrates should be clean, dry, and free from any previous applied products.

- **Aluminum** should be sandblasted for best results. Can be sanded with coarse sand paper in small applications.
- **Galvanized Steel** should be clean, dry, and free of any previous applied products. Rust does not need be removed to "shiny metal". Only larger loose flaking rust needs removed either by pressure washing, lightly sand-blasting, etc..... All bond breakers such as paints or any other previously applied products and oils need to be removed to ensure a permanent bond. Wire wheels are not suggested. If oily spots are present, see Technical Information for Oil or Grease Contamination. Galvanized steel should be acid washed and rinsed, see Technical Information for Acid Etching Instructions. Sand blasting is always preferred over other methods.

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow working strength bond) before pulling at raw edges of the test patch.

Painted Steel Preparation

Make sure the substrate is clean, dry, and no bond breakers such as oils, greases, waxes, petroleum products, caulks, etc.... see Technical Information for Oil or Grease Contamination.

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow working strength bond) before pulling at raw edges of the test patch.

Styrofoam, Polystyrene Preparation

Make sure the substrate is clean, dry, and no bond breakers such as oils, greases, waxes, petroleum products, caulks, etc.... see Technical Information for Oil or Grease Contamination. If water beads up on the surface after this treatment, it may be best to replace that portion with new material.

Do not thin the PermaFlex when applying on Styrofoam or Polystyrene. The surface will melt and destroy the surface!

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow working strength bond) before pulling at raw edges of the test patch.

Sani-Tred products should not be applied to Styrofoam foundation forms to waterproof or radon proof a foundation.

Fiberglass Preparation

For best results, fiberglass should be sand blasted. With small applications coarse sand paper can be used. This is done not only to make sure the substrate is clean and free of any previous applied products, but to also rough profile to ensure the most durable and permanent adhesion.

In small applications it is best to then wipe the surface with Acetone before priming with PermaFlex

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow working strength bond) before pulling at raw edges of the test patch.

Concrete Floor Preparation

Before any floor coating is applied to concrete, the concrete should always be prepared properly to ensure a permanent bond. The bond, durability, and service life of any floor surface material relies on proper concrete surface preparation. Concrete floors should be clean, dry, and free of any previous applied products.

Proper Methods of Preparation:

- Acid Etching (floors only) See Technical Information for Acid Etching Instructions. Acid Etching **WILL NOT** strip or remove products and **MUST NOT** be attempted in order to strip or remove products.
- Sand Blasting (no need to acid etch)
- Captive Ball Blasting (no need to acid etch)
- Scarifying (no need to acid etch)

Sand blasting, captive ball blast, or scarifying the concrete floor surface is always preferable to acid etching when ever possible. These methods are not used just to clean the floor, but to remove weak surface paste and "latencies" from the surface of the concrete.

While these treatments are effective on new concrete, they may not be completely effective on old concrete with oil, grease, or other bond-breakers on it. If oily spots are present, these areas must be decontaminated FIRST, see Technical Information for Oil or Grease Contamination before further preparation is done such as acid etching, sandblasting, etc...

A crude but practical test of whether the Sani-Tred PermaFlex can penetrate and bond is to sprinkle water onto the substrate and observe its penetration. If it beads up, that is an indication that a bond-breaker is present. If water can penetrate, then the Sani-Tred PermaFlex can penetrate also.

A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow working strength bond) before pulling at raw edges of the test patch.

Concrete Wall Preparation

- Make sure the substrate is clean, dry, and free of any previous applied products. For concrete floors ONLY, See Technical Information for Concrete Floor Preparation and Acid Etching Instructions.

Removing Efflorescence

This can be done many ways. In cases of slight efflorescence a hand held wire brush can be used. In extreme cases acid etching while manually scrubbing with a plastic scrub brush may dissolve the efflorescence (must thoroughly neutralize the substrate after etching) See Technical Information for Acid Etching Instructions. 3,500 psi pressure washer with a zero orbital tip, sand blasting, grinding, etc... will work as well. We do not suggest the use of an electric wire wheel.

How To Artificially Dry Wet Concrete

If water/moisture is present and allowing it to completely dry naturally is not applicable, you must use a torch as shown within our website www.sanitred.com under "How To", click "How To

Artificially Dry Wet Concrete". This is a 500,000 BTU propane weed burning torch, roofer's torch, Dragon's Breath torch, etc...

Concrete Block

Before Sani-Tred products are applied, concrete block should be clean, dry, and free of any previous applied products, efflorescence, bond breakers etc... Concrete block is extremely porous and requires 3 coats of PermaFlex to become completely waterproofed and withstand negative hydrostatic pressure for below grade (below ground) applications. Some very large pores, holes, gaps, etc may exist in concrete block which will require LRB/TAV mixture to fill such imperfections in the substrate.

In above grade applications (above ground) where 100% waterproofing is not necessary and Sani-Tred products will be used merely as a paint replacement; at least 2 coats of PermaFlex is necessary.

Removing Efflorescence From Block Walls

This can be done many ways. In cases of slight efflorescence a hand held wire brush can be used. In extreme cases acid etching while manually scrubbing with a plastic scrub brush may dissolve the efflorescence (must thoroughly neutralize the substrate after etching) See Technical Information for Acid Etching Instructions. 3,500 psi pressure washer with a zero orbital tip, sand blasting, grinding, etc... will work as well. We do not suggest the use of an electric wire wheel.

- You can use a 3500 psi pressure washer with a zero orbital tip.
- Many use a hand held wire brush.
- As a last resort one can acid etch the block, but should use a 5% dilution instead of a 10% dilution. See Technical Information for Acid Etching Instructions. Block is not as tough, as high of quality, and much more porous than poured concrete.

Glass, PVC, Acrylic, Granite, Marble, Porcelain and Plastics

Sani-Tred products will not achieve an extremely durable permanent adhesion to PVC, CPVC, Vinyl, all plastics.

- **PVC, Plastics:** Using coarse sand paper; roughen the area being applied to in order to gain the maximum bond and physical grip to the plastic. Begin the Sani-Tred application. If sanding is not applicable Apply 1 coat of Incredible Products' Epoxy Primer to the plastic. Once cured (in just a couple of hours depending on temperature) you may begin the Sani-Tred application.
- **Glass:** Apply 1 coat of Incredible Products' Epoxy Primer to the glass. Once cured (in just a couple of hours depending on temperature) you may begin the Sani-Tred application.

Tile, Glazed Brick

- All substrates should be clean, dry, and free from any previous applied products.
- The best preparation is always sand blasting.
- Incredible Products LLC offers "Tile & Brick Preparer" which can be used to prepare tile and glazed brick.

Oil or Grease Contamination

A crude but practical test of whether the Sani-Tred PermaFlex can penetrate and bond to concrete, concrete block, brick, wood, etc... is to sprinkle water onto the substrate and observe its penetration. If it beads up, that is an indication that a bond-breaker is present. If water can penetrate, then the Sani-Tred PermaFlex can penetrate also. A test patch is always recommended where there is any doubt that a secure bond can be achieved. This test patch should be left for at least five days (to allow the product its full working strength) before pulling at raw edges of the test patch. If you are having any problems or have any questions concerning preparation, please call Incredible Products LLC 574-784-9000, email, or fax 574-784-9970 for suggestions.

Concrete Materials - In order to decontaminate concrete, concrete block, cement board, brick, etc... degreasing solutions will NOT degrease deep enough into the substrate to properly decontaminate. You must use a torch as shown within our website www.sanitred.com under "How To"; click "How To Artificially Dry Wet Concrete". This is a 500,000 btu propane weed burning torch, roofer's torch, Dragon's Breath torch, etc... This method will incinerate oils or grease within the surface of the concrete and any residue should be washed away using a 3,500 psi pressure washer with a "zero orbital tip" before any further preparation is attempted.

- Even if oil or grease contaminants are removed properly and application is long delayed, oils may creep back up to the surface of the concrete.

Metals - If oily spots are present on steel, galvanized steel, aluminum, cast iron, etc... they should be removed with an appropriate cleaning or foaming-degreasing solution, hot water/pressure washer, and/or use a torch (if applicable) to incinerate the oil contamination.

Fiberglass Surfaces - Fiberglass or other more delicate and nonporous substrates that can not be torched should be degreased with foaming-degreasing solution or wiped with Xylene or Acetone "except for Styrofoam - it will melt".

Wood - Wood with oil contamination, Thompson water sealer, would be very hard to decontaminate. In most cases one would replace the wood or lay new wood over the contaminated surface.

PermaFlex, LRB Thinning and Clean-Up Instructions

Thinning PermaFlex and LRB. Due to EPA regulations some thinning agents had to be removed from PermaFlex therefore it has a higher viscosity and requires that the customer thin PermaFlex. It is recommended to thin PermaFlex and LRB 15-25% with an approved solvent. This would be 19-32 ounces per gallon by volume (available at most Sherwin Williams, hardware stores, paint stores). Thinning PermaFlex or LRB simply makes the material runnier, distribute quicker/easier, and allows trapped air to escape. In states where it is allowed we recommend Xylene (in states where allowed), Odorless Mineral Spirits or Acetone. Acetone flashes (evaporates) more quickly. Never thin Sani-Tred products with a 'solvent blend' or a solvent that contains traces of alcohol. Alcohol inhibits curing of all Sani-Tred products and mixtures. All clean-up or thinning must be performed with an approved solvent (not a solvent blend but 100% only). If you are not sure if your approved solvent is 100% (not a solvent blend) we recommend mixing a small amount with your PermaFlex or LRB in a separate container. If it foams or does not cure then it is likely a solvent blend. Sani-Tred products are solvent free, low VOC, and low odor. Once mixed with an approved solvent it now contains solvent, has higher VOC, and higher odor. The use of a carbon filter mask (designed to filter solvents), full breathing apparatus, and ventilation may be necessary (See SAFETY Information for CONFINED SPACES -Ventilation).

When Cleaning Tools you can use Xylene, Odorless Mineral Spirits or Acetone.

When Cleaning Your Skin before the Sani-Tred product cures, you may scrub using dish soap or Isopropyl alcohol. In extreme cases, you may use Xylene, Odorless Mineral Spirits or Acetone.

LRB and TAV Instructions

Mixing LRB with TAV

A prime coat of PermaFlex needs to be applied before applying LRB or LRB/TAV mixture to allow for proper liquid penetration and bonding to the substrate surface. LRB and TAV mixture is used to patch, fill, profile, and create a flexible seal wherever a primed crack, joint, seam, hole on any horizontal, vertical, or inverted damaged area exists.

- Remove the lid from the container of LRB (Liquid Rubber Base). Thoroughly mix the contents of this container. LRB may contain settled solids.
- Mix 1 part TAV into 2 parts LRB. Mix until it becomes thick like 'silicone caulk'. You can mix by hand, but for best results use a variable speed drill and a mixing paddle.
- You can use less than 1 part TAV to 2 parts LRB for a more fluid mixture, but no more than 1 part TAV or an extremely low quality mixture will result.
- It is recommended to only activate what LRB you will be applying within a conservative amount of time.
- Once mixed, you will have a working time of approx 30 min. before the mixture loses its ability to bond to the PermaFlex prime coat.

Applying LRB/TAV Mixture

- LRB/TAV mixture can be placed into a tough Ziploc freezer bag, cut out a corner, and quickly squeeze the mixture out at desired locations. This mixture may also be applied using a small or large squeegee, putty knife, broad knife, trowel, etc... The wall/floor junction requires a 1" bead of LRB/TAV mixture; most cracks - use a 3/4" bead.
- LRB/TAV mixture can be applied at ANY thickness to fill any size joint, seam, crack, or holes.
- Once roughly applied, one can smooth it out using a brush dipped in Xylene. This will give the LRB/TAV mixture a "smooth as glass" finish.
- There are no specified waiting periods between coats or steps throughout the Sani-Tred application; as soon as the coat or step has become cured enough to walk on or tacky/stiff enough to continue with the application; you can immediately proceed with the next step. All Sani-Tred products are completely compatible and will molecularly weld at ANY stage throughout their curing process.
- LRB/TAV mixture may slightly shrink (approx 5%) once it has completely cured. One may reapply LRB/TAV mixture to compensate if desired. The mixture will shrink less if less TAV is mixed with LRB - a more fluid mixture will result.

Special Patching Mixtures

LRB should be activated with water (See Mixing LRB to be used as membrane, self-level a low spot or flood coat for Catalyzing instructions) can be mixed with rubber granules supplied by Incredible Products LLC for incredible economy to fill large joints, holes, replace missing pieces

of concrete, etc... without sacrificing flexibility unlike other bulk fillers such as sand, gravel, etc... Clean dry sand, stones, pea gravel, etc... can be mixed with catalyzed LRB for incredible economy to fill large holes. By economizing with such bulk fillers you will drastically reduce LRB's flexibility. Do not use such mixtures in joints, seams, cracks, or wherever maximum flexibility is desired.

- Mix no more than 3 parts "Rubber Granules" (by volume) to 1 part LRB - This will give you a thick and very economical mixture. Less "Rubber Granules" can be used and will create a more fluid mixture.
- Mix no more than 3 parts clean dry sand (by volume) to 1 part LRB - This will give you a thick and very economical mixture. Less sand can be used and will create a more fluid mixture.

Only mix what you can apply in a short period of time to ensure "workability time" and a molecular weld to the PermaFlex

IF TAV HAS BEEN MIXED WITH THE LRB, DO NOT ADD WATER!

Mixing LRB to be used as membrane, self-level a low spot or flood coat

A prime coat of PermaFlex needs to be applied before applying LRB or LRB/TAV mixture to allow for proper liquid penetration and bonding to the substrate surface. A smooth Plywood system must have a LRB membrane (40 mils thick/40 sq ft per gal coverage) for a life time seal and ultimate durability. Less LRB (a thinner membrane) can be used (OPTIONAL).

Add LRB Catalyst and 25% water to the LRB. LRB to be used as a "fluid mixture" should always be mixed with LRB Catalyst. LRB Catalyst does not make LRB cure, LRB needs the H2O molecules to cure throughout its entire volume. LRB Catalyst ensures a tack free "surface".

How Much Catalyst?

D. 2 oz LRB Catalyst per 5 gal pail of LRB

E. .4 oz LRB Catalyst per 1 gal pail of LRB

F. If mixing a smaller batch of LRB; use a proper ratio of LRB to LRB Catalyst as shown above.

- Blend at low speed without whipping air bubbles into the LRB. For best results use a heavy duty 1/2" drill and large mixing paddle. The LRB will not appear to blend well with the water at first but keep mixing at low speed. The water is suddenly absorbed into the LRB. The LRB is now catalyzed and will cure tack free in 4 hours at normal temperatures (70 degrees F) throughout its entire volume (longer in cooler temps, quicker in warmer temps).
- Thinning the LRB will make it easier to brush, roll, self level, allow any trapped air to escape quicker, create a smoother surface, yet may take a little longer to cure. Thin LRB after it has been activated with LRB Catalyst and water. See Technical Information for Thinning Instructions and SAFETY Information (if thinning is desired).

Applying LRB to be used as membrane, self-level a low spot or flood coat

- The working time of the catalyzed LRB is approx 30-40 min. It is best to distribute the LRB quickly. Use small batches if necessary.
- Pour all of the pail contents on the floor; do not leave a quantity in-mass in the mixing pail (cures quicker). No induction time is necessary. The bucket may be turned upside down on the floor and distributed evenly.

For Horizontal or Slight Pitched Applications:

- Distribute and apply the LRB using a roller, flat squeegee, or notched squeegee supplied by Incredible Products LLC with light down pressure. Notched squeegees are used to distribute LRB at a gauged thickness of approx 40-60 mil thick.
- When rolling LRB repeated back rolling may be necessary to evenly distribute.
- When applying LRB, one can wear "golf spikes" to enable the applicator to literally walk on to the wet coating/membrane during the application without leaving foot steps in the coating. This is very helpful especially on large floor applications and walking behind a notched squeegee supplied by Incredible Products LLC.

IF WATER & LRB CATALYST HAS BEEN MIXED WITH THE LRB, DO NOT ADD TAV!

Setting/Adhering Tile

The first thing you would do is waterproof the area you want to adhere the tile to. The basic steps are listed below:

1. Preparing the substrate. Meaning remove any loose crumbly substrate, make sure the substrate is clean, dry, free of any previous applied products, and foreign matter.
2. Prime the substrate with 1 coat of PermaFlex (240 sq ft per gal).
3. Patch and profile any joints, seams, cracks, holes, etc. using LRB/TAV mixture. LRB can be used (as a fluid) to create a waterproof membrane at any thickness.
4. Topcoat using 1 coat of PermaFlex (240 sq ft per gal).

Now that the area has been waterproofed, you would want to prime the backs of your tiles using 1 coat of PermaFlex (approx 240 sq ft per gal) and allow to cure or at least until it has become quite tacky.

You would mix up a small batch of LRB/TAV mixture (thickened mixture); most people would use a notched trowel or a notched tool to evenly distribute the LRB/TAV mixture @ approx 40 sq ft gal. This mixture would be used to set your primed tiles. You can butt your tiles "side to side" or space them to accept standard grout. Grout may be used as soon as 3-4 hrs after setting the tiles.

Repairs, Future Re-Application, Color, or Texture Changes

Under extreme usage over extended periods of time the PermaFlex floor surface could eventually show signs of wear, in heavy traffic areas such as stair treads or entry ways. Any worn or damaged areas are easily repaired, re-colored or surface altered at any time in the future without removing existing material.

1. Cleaning the existing surface:

The old surface should be chemically cleaned to remove bond breakers such as oils, wax, fats, cleaning agent residues, etc. A good degreasing cleaner such as T.S.P. (tri-sodium-phosphate) or other strong household or commercial degreasing cleaner should be used to thoroughly clean, rinse, and dry the surface.

It is best to then wipe/clean the surface with Acetone or Xylene to chemically prep the surface. You do not need to wait before applying the new surface coat (best if applied immediately).

2. Reapplying a new surface coat

3. Apply 1 coat of LRB (Liquid Rubber Base) at 240 sq' per gal to all surfaces to be reapplied to. Technical Information for Mixing LRB to be used as membrane, self-level a low spot or flood coat.
4. If you have any joints, seams, cracks, holes or rough areas apply LRB/TAV mixture. Wall/floor junctions require a 1" bead and most cracks larger than hairline use a 3/4" bead.
5. Apply 1 coat of PermaFlex at 240 sq' per gal to all surfaces.

Acid Etching Instructions

PROPER CONCRETE ACID ETCHING IS A REQUIREMENT FOR ALL SANI-TRED FLOOR INSTALLATIONS ON THE ORIGINAL SURFACE. ACID ETCH PROCEDURE MUST BE FOLLOWED EXACTLY AS SPECIFIED BELOW FOR PROPER INSTALLATION.

SAND BLASTING, CAPTIVE BALL BLAST OR SCARIFYING THE CONCRETE FLOOR SURFACE IS ALWAYS PREFERABLE TO ACID ETCHING WHEN EVER POSSIBLE.

Condensed Acid Etching Explanation:

- Make sure the substrate is clean and free of any previous applied products and other bond breaking contaminants, sealers, etc...
- Reduce Muriatic Acid (same as hydrochloric acid) with water to a 10% solution. Apply the acid etching solution over the concrete and agitate using a push broom until foaming action stops.
- Rinse with warm water (ideally) or with a pressure washer
- Mix Apply a "neutralizing solution" over the concrete
- Rinse with warm water

Detailed Acid Etching Instructions

The purpose for acid etching is to remove "latencies" from the surface of concrete floors. When a floor slab is poured, contractors etc often float or trowel the surface smooth by working up a smooth weak film over the concrete surface, this weak film is called "latencies". Latencies can be removed many ways, see Technical Information for Concrete Floor Preparation

Preparation:

Never acid etch concrete walls, unless the concrete was troweled by hand. Acid etching concrete floors will provide an approved surface in which to produce a penetrating and permanent bond for the Sani-Tred products. While this treatment is effective on new concrete, it may not be completely effective on old concrete with oil, grease, fats, or other bond-breakers present, unless it is properly prepared. If oil contamination exists see Technical Information for Oil or Grease Contamination. Before any floor coating is applied to concrete, remove ANY previous applied products, sealers, contaminants, bond breakers, etc... The concrete should always be prepared properly in order to allow a penetrating and permanent bond of the Sani-Tred products. The bond, durability, and service life of any floor surface material relies on proper concrete surface preparation. Previously applied paints or coatings may usually be removed using our "Off The Wall Coating Remover" which is available from Incredible Products LLC, then washed and acid etched. Other methods of preparation: see Technical Information for Concrete Floor Preparation.

Mixing and Applying Acid Etching Mixture:

Muriatic (Hydrochloric) acid is normally available from local hardware stores, lumber companies, swimming pool supply, chemical companies, etc... at a 31% to 37% concentration that MUST be diluted with additional water to bring it to a 10% solution. If the "acid etch mixture" is not properly mixed at a 10% solution, the solution will be to weak to properly remove concrete latencies or it may be too strong and etch the surface deeper than necessary, and soak into the concrete

surface and contaminate it with a destructive, lingering, acidity after floor materials are applied. Never use "straight acid" mixtures for this reason. Muratic Acid is typically packaged at a 30% dilution (be sure); you want to dilute it down to a 10% dilution (1 part acid to 2 parts water).

The acid etching solution can be poured out, distributed using a squeegee, and agitated the surface using a push broom. Keep the acid etch solution on until it stops foaming. When the acid etch solution stops foaming you can begin rinsing. If the acid mixture does not "foam" evenly over the entire surface of concrete on which it is applied or simply "beads up" on the surface, then this is a sign that a foreign "bond breaker" is on the surface of the concrete. This could be concrete curing sealers, oils, grease, fats, silicone, paints, clear coats etc... If acid alone is used on a concrete surface with a bond breaker present, it will not acid etch the floor, will not remove oils, and will not remove coatings, sealers, etc... because acid is not a degreaser or a remover. Oils may only be temporarily "floated" above the surface, only to be re-deposited elsewhere when the floor dries. If the floor has large areas that are contaminated with oil, grease or other bond-breakers, they should be removed or decontaminated from the concrete surface. Technical Information for Oil or Grease Contamination.

Rinsing Acid Etching Solution:

Flush away the acid etching solution with warm water (preferably). One may remove acid etch solution with a shop vac, squeegee, rented water handling equipment, or pressure washer (ideally).

Mixing and Applying Neutralizing Solution:

Before neutralizing, it is best to choose which neutralizing solution would be best for your application. After acid etching and rinsing, the concrete should be neutralized otherwise the concrete will be left and acidic contamination which will inhibit PermaFlex from adhering permanently. One can neutralize with either of the following solutions:

- 1 cup household baking soda per gallon of water, allow it to stand for at least 15 min., do not allow to dry. After rinsing, you can allow it to dry naturally or torch it dry and immediately begin the Sani-Tred application. Most often the best neutralizing solution to use.

Rinsing Neutralizing Solution:

Flush away the neutralizing solution with water. To do so, one may remove the Neutralizing Solution with a shop vac, squeegee, rented water handling equipment, or pressure washer and rinse the concrete with water.