INSTACOAT

SEAMLESS MEMBRANE

TRAINING MANUAL

Product Introduction

The **Instacoat** plural component membrane system was designed for the roofing, waterproofing and corrosion control industries. The **Instacoat** system is a rapid set cold spray applied membrane. **Instacoat** is free from the problems found in conventional membranes. **Instacoat** is also a technology that is environmentally friendly, safe, and easy to apply.

Instacoat is a highly modified asphalt emulsion and a chemical reactant. Both components are waterborne and designed to be applied at ambient air temperatures to create a monolithic seamless membrane. **Instacoat** forms a strong bond to most materials in a single instant set application that eliminates water tracking under the membrane.

Since **Instacoat** is cold spray applied it will not become brittle or crack like hot applied systems. Because of its high elongation and recovery it is well suited for the most demanding environments.

The **Instacoat** membranes were designed to eliminate the main causes of failures of conventional systems. **Instacoat** is a strong and self-sealing to minor punctures and self-healing when it can come into contact with itself. It resists ultraviolet exposure, ageing, and is non-toxic.

Almost all coating and membrane failures are a result of poor or untrained application procedures and techniques. **Instacoat** has a training and support program to teach and certify all applicators in the correct application of its products. **Instacoat** will only warranty their products that are applied by a certified applicator according to their guidelines, set forth in this manual and hands on training.

Some of the advantages of the Instacoat system:

Better Performance- The products superior elongation, recovery, ability to withstand thermal cycling, and adhesion allow it to out perform the conventional systems on the market today.

Dependable- The product is a monolithic seamless membrane that fully bonds to the substrate thus eliminating water tracking and seams. This eliminates most failures that you find in other systems.

Fast and Easy Application- The product is cold spray applied, that emits no VOC's and contains no solvents, in a one coat application. The average certified applicator can apply 8,000 to 10,000 square feet (800 to 1,000 square) a day.

Cost-Effective- By using this system you will reduce your installation time compared to conventional membranes. This will allow you to finish projects quickly at a lower cost while still maintaining the highest quality.

Applicator Guidelines

- Promote, market, sell, and use the **Instacoat** to maximize the potential of the products and system.
- Use the products in compliance with this manual and technical advice from **Instacoat** personnel.
- Attend training sessions as required by **Instacoat** in respect to advances and/or changes to the products or system.
- Refrain from giving any promises, warranties, or guarantees in relation to the products or system without first obtaining approval from **Instacoat** in writing.

Instacoat Products

Part "A" (Spray Grade)

- The **Instacoat** material is a highly modified asphalt emulsion that is brown in color. Shipped in 52-gallon drums or 275/330 gallon totes. Call your distributor for larger shipments.
- Part A is required to be agitated prior and during application to ensure a uniform product. Prior to application part A must be agitated for a minimum of 15 minutes in a drum and 45 minutes in a tote using a mechanical low rpm mixer. Part A will be mixed during application using the circulation return line incorporated with the pump system.
- Part A is required to be agitated monthly if stored for long periods of time.
- As mentioned it is important that the product is well mixed. Failure to do so will result in a non-uniform product that may result in a failure of the membrane.
- An unmixed product can be easily identified by a white substance at the top and bottom of the container and could result in the manufacture not taking responsibility for the warranty.
- An airtight seal is important when the product is not in use because the product will skim over if an air tight seal is not maintained thus causing problem during the application.
- During the application part A should be filtered. The strainer that came with the system must be attached to the supply line to filter the product.
- To identify if the product has been contaminated obtain a small amount of part A and mix with a small amount of part B to ensure that the products react correctly. If the result differs **DO NOT USE** and contact your distributor for replacement material.
- If a spillage occurs it is best to apply an equivalent amount of part B into the spillage and scrape up the set product. For general clean up use mineral spirits. For clean up of skin contact use baby oil.

Part "B" (Activator)

- Part B is the chemical reactant that gives the **Instacoat** system the instant set.
- Part B is shipped in dry form in 5 gallon buckets.
- Part B is a white pellet/flake material when dry.
- Part B is to be mixed with water at a ratio of 1 pound of part B to 1 gallon of water. Continue to mix part B and water until part B is completely dissolved. Part B will also need to be agitated if mixed prior to arrival at the job site for a minimum of 10 minutes.
- Part B should be a minimum of 97% pure prior to mixing with water. If it's not 97% pure the ratio of part B to water will need to be adjusted.
- As mentioned it is important that the product is well mixed. Failure to do so will result in a non-uniform product and may result in a failure of the membrane.
- During application part B should be filtered. The strainer that came with the system must be attached to the supply line to filter the product.
- If the mixed product appears to be contaminated **DO NOT USE**.
- If the dry product appears to be contaminated contact your distributor for replacement.
- If a spillage occurs it is best to rinse with water. For general clean up use soapy water.

Roller/Brush Grade

- Roller/brush grade is a single component product shipped in 5-gallon containers.
- Roller/brush grade is brown in color with the consistency of pudding.
- Roller/brush needs to be mixed with a mechanical mixer or manually until it has the same consistency throughout.
- As mentioned it is important that the product is well mixed. Failure to do so will result in a non-uniform product and may result in a failure of the product.
- If the product appears contaminated **DO NOT USE** and contact your distributor for replacement.
- For general clean up use mineral spirits. For clean up of skin contact use baby oil.
- **DO NOT** use a foreign material to cut this product. This will result in the **Instacoat** not taking responsibility for the warranty.

Trowel Grade

- Trowel grade is a single component product shipped in 5-gallon containers.
- Trowel grade is brown in color with the consistency of roofing mastic.
- Trowel grade need to be mixed with a mechanical mixer or manually until it has the same consistency throughout.
- As mentioned it is important that the product is well mixed. Failure to do so will result in a non-uniform product and may result in a failure of the product.
- If the product appears contaminated **DO NOT USE** and contact your distributor for replacement.
- For general clean up use mineral spirits. For clean up of skin contact use baby oil.
- Do not use a foreign material to cut this product. This will result in the **Instacoat** not taking responsibility for the warranty.

Instacoat Equipment Prep

The Instacoat Equipment

- The **Instacoat** Equipment is a high volume, low-pressure pump system that consists of a 5.5 horsepower gas motor, two belt driven pumps, intake and discharge hoses, and a spray gun.
- The pump system may run two guns simultaneously or just one gun may be used depending on the size and timeframe of the project.
- The System was designed to provide the applicator with a relatively inexpensive and user-friendly system to operate without jeopardizing quality.
- It is advised that you do not run the equipment until you have received the physical training.

Setting up the Equipment (visual aids provided on pages 7 & 8)

- Check oil levels in motor and pumps, fill if necessary using 10W30 non-detergent oil.
- Connect both A and B side intake and bypass hoses to the correct outlets.
- Attach the PVC pipe to the other end of the intake line on both the A and B sides.
- Attach the appropriate strainer to the opposite end of the PVC tube on both sides.
  - The A side will be a 30-mesh strainer. (Larger holes)
  - The B side will be a 100-mesh strainer. (Smaller holes)
- Zip tie the bypass line to the intake line from the faceplate to the strainer.
- Connect both A and B side discharge hoses to the front face frame and then the spray gun.
  - We will only be hooking up one gun at this time. The other discharge hose fitting should be capped.
- Check to make sure the each discharge hose is in the correct position on the pump and the gun.
- Check diaphragm cap pressure on both pumps. Adjust if necessary. (See calibration table on Page 6)
- Turn the pump valve to the on position on both sides.
- Insert intake and by pass lines into water on both sides.
- Start the drive motor. Check the pressures on both pumps and adjust accordingly. Let circulate for two minutes while checking for leaks. (See calibration table)
- Turn the equipment off. (On off switch on the right side of the drive motor)
- Insert the A side intake and by pass lines into a mixed drum of Instacoat Spray Grade.
- Insert the B side intake and by pass lines into a mixed drum of Instacoat Activator.
- Open the gate valve to the discharge lines on both the A and B sides. (Open only the side you have the hose hooked to)
- Remove tips from the gun.
- Start the drive motor and check pressures on the both pumps.
- Open ball valve on the gun for the part A side. Point the gun in a waste bucket and squeeze the trigger until a steady flow of material comes out then release trigger.
- Close the ball valve on the gun for side A and open the ball valve on the gun for part B side. Point the gun in a waste bucket and squeeze the trigger until a steady flow of material comes out then release the trigger.
- Attach the correct tips to the gun extensions for both side A and Side B. Squeeze the trigger until a full fan pattern is coming out of both tips.
- Spray contents into a waste bucket until the product is setting up correctly.

Dismantling of the Pump System

- The majority of the time the most common dismantling of the pump will only be to remove the check valves, clean and reinstall and the disconnecting of the hoses. All other repairs will be covered during the physical training.

Checking the Pump During Operation

- Regular checks of the pump are to be made during application to ensure the following:
- Sufficient material is in supply tanks for both part A and B.
- Pressures are remaining consistent.
- Filter on intake lines are not blocked.
- Sufficient gas in the motor.

Instacoat Equipment Clean Up

Daily Cleaning of Instacoat Equipment

- Put the all valves to the discharge lines in the off position.
- With the drive motor running and the pump valve in the on position remove part A and B side intake lines from the product and let it run until all the material in the pump has discharged.
- Turn off drive motor immediately.
- Put part A side intake line into a minimum of 4 gallons of cleaning solution (mineral spirits).
- Put part B side in water (warm if possible) as the cleaning agent.
- Start the drive motor and let circulate for a minimum of 2 minutes.
- With the drive motor running and the pump valves in the on position remove part A and B side intake line at the same time from the cleaning solution and let it run until all the material in the pump has discharged.
- Turn off drive motor immediately.

Monthly Cleaning of Instacoat Equipment (applicable if equipment is not being used)

- With the drive motor running and the pump valve in the on position remove part A and B side intake lines from the product and let it run until all the material in the pump has discharged.
- Turn off drive motor immediately.
- Put part A side intake line into a minimum of 10 gallons of cleaning solution (mineral spirits).
- Put part B side in 10 gallons of water (warm if possible).
- Start the drive motor and circulate for a minimum of 1 minute.
- Remove both the part A and B tips from the gun.
- Open the ball valve to discharge lines on part A side only. (Both sides if two guns are attached)
- Open ball valve on the gun to part A side only. (On both sides if two guns are attached)
- Ensure that the all discharge ball valves on the B side pump and gun(s) are in the off position.
- Put part A side gun extension into the cleaning solution for part A side.
- Pull the trigger on the gun and circulate for a minimum of 3 minutes.
- Close part A side ball valve on the gun(s) and close the part A side valves to the discharge lines.
- Repeat for the B side.
- With the drive motor running remove intake lines on part A and B side at the same time from the cleaning solution and let it run until all the material in the pump has discharged.
- Turn off drive motor immediately.
- Remove the all discharge lines from the gun and faceplate and blow out any remaining cleaning solution with air. **DO NOT** leave cleaning solution in the lines because it will damage them.

90 day cleaning

- Do monthly cleaning as stated above.
- Remove check valves and clean.
- Remove diaphragm and check for cracks or tears.

Gun cleaning (Daily or as needed)

- Turn off ball valves on the gun on both sides.
- Remove extensions and valve seats from part A side.
- Using a spray bottle with cleaning solution (mineral spirits). Squirt cleaning solution into the opening while working the trigger. You will feel the trigger free up when it is clean.
- Put in valve seat and install the extensions.
- Repeat for part B side using water. (Warm water if possible) \

Monthly Gun Cleaning

- Dismantle the gun. Clean and inspect all parts. (Gun specifications on page 8)

Pump Maintenance

- As with any pump system continual maintenance on a regular schedule is always advised. The Instacoat System is no exception, maintenance suggestions follow:
- Clean pump with new cleaning solution at least once a month.
- Clean all fittings, hoses, and gun regularly to avoid blockages.

- Inspect hoses and fittings regularly for deterioration.
- Inspect diaphragms and internal pump parts every 3 months for deterioration.

Do's and Don'ts

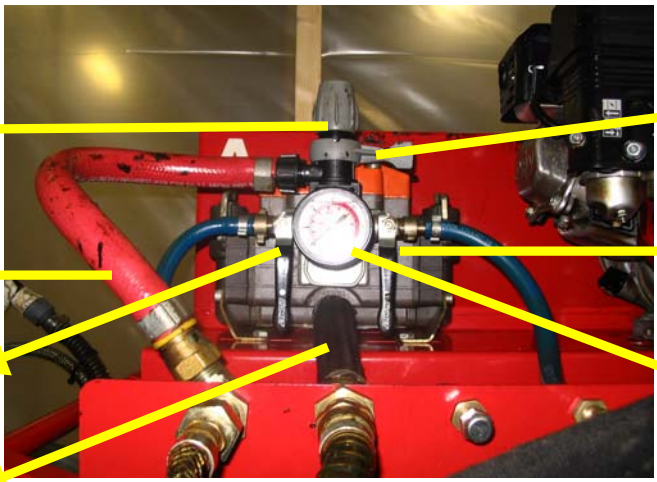
- *Do's*
  - Try to keep waste of all components including cleaning solution to a minimum.
  - Regular maintenance checks on all equipment.
- *Don'ts*
  - Let pumps run dry.
  - Contaminate material with part B or cleaning solution.
  - Leave hoses in cleaning solution for long periods of time.
  - Dispose of waste in an irresponsible manner.
  - Try new ideas without contacting **Instacoat** first.

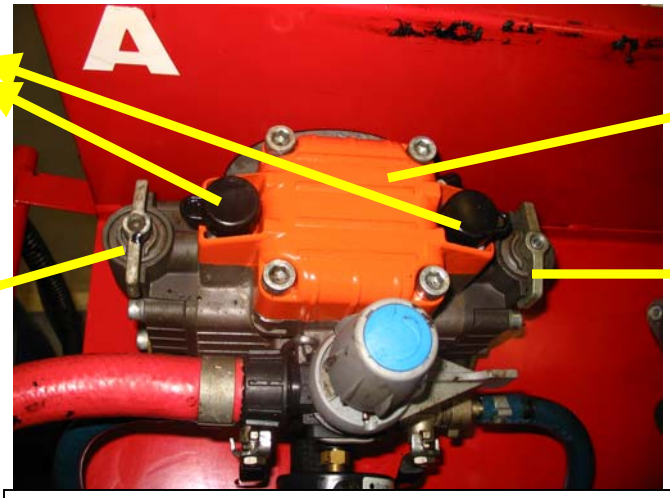
Pump Trouble Shooting Table

Symptom	Cause	Remedy
Pump does not prime	Pump not in on position	Turn pump to the on position
	Clogged intake Strainer	Clean or replace Strainer
	Check valves clogged	Clean or replace check valves
	Loose fittings on intake	Tighten intake fittings
	Cracked or punctured diaphragm	Replace diaphragm
Pump does not reach desired pressure or maintain pressure	Clogged intake filter	Clean or replace filter
	Wrong tip size	Use correct tip sizes
	Pump rotation inadequate	Check drive belts
	Cracked or punctured diaphragm	Replace diaphragm
Excessive diaphragm vibrations	Diaphragm not properly inflated	Restore correct inflation
Pump oil white in color	Diaphragm ruptured	Replace diaphragm

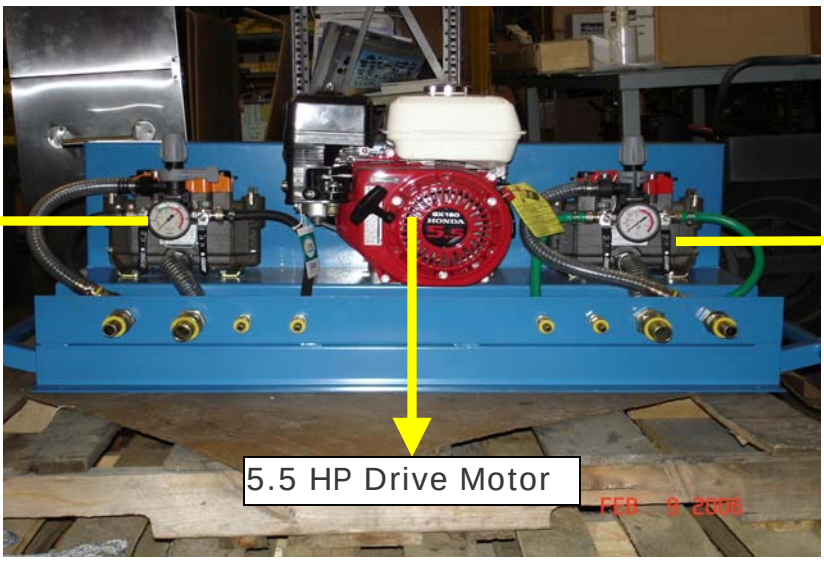
Calibration Table

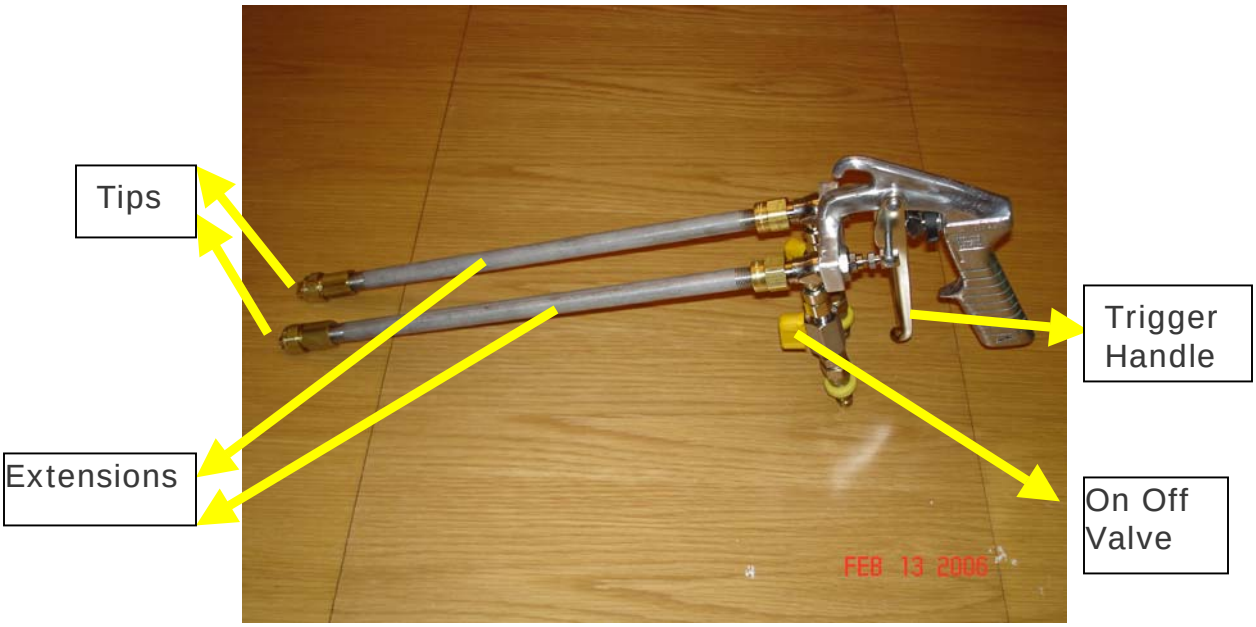
	Main Area		Detail Area	
	Part A	Part B	Part A	Part B
Cap Pressure	60-70 PSI	50-60 PSI	60-70 PSI	50-60 PSI
Pump Pressure	200 PSI	70 PSI	200 PSI	70 PSI
Tip Size	4015/ 6515	4001/ 6501	4008/ 4015	4001



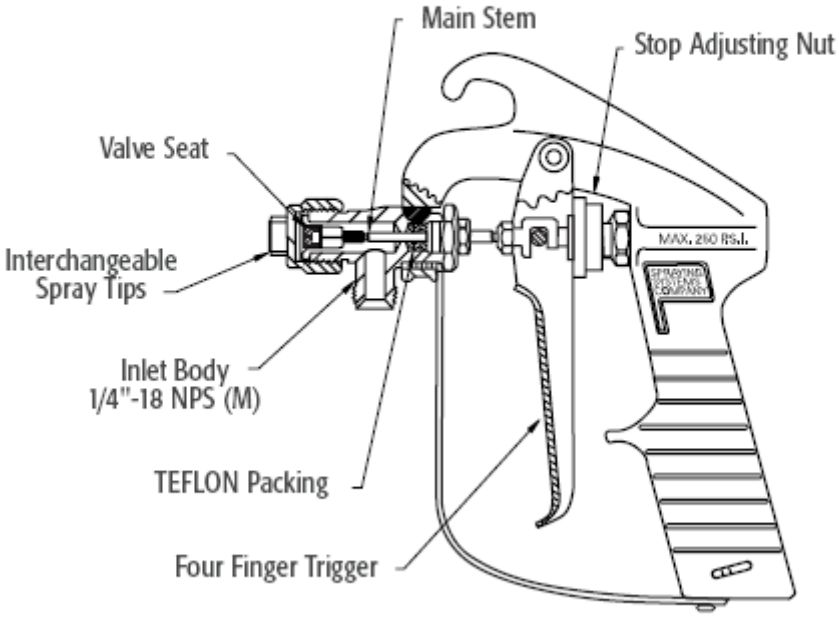


Note: The cap pressure valve is located on the backside of the diaphragm cap.





23L GunJet Specifications



Substrate Preparation

Instacoat Seamless Membrane can be applied to a variety of substrates and can be used as a protective coating or a waterproofing membrane. The most common substrates are:

- Concrete
- Metal
- Foam
- Wood
- Asphalt based roofing products
- Single ply systems
- Geotextile fabrics

It is best to contact your distributor if a particular substrate is in question or try a test area on the substrate first.

Minimum Requirements for Substrates

- Substrate surfaces must be clean and free of debris. The surface must be free of wax, oil, and other containments. The surface must offer an unpolished, non-slippery, fine textured uniform base. Proper surface prep may require de-oiling, de-waxing, laitance removal, etching, shot blasting, blast cleaning, crack filling, remedial fill topping, or adhered grade topping, as necessary.
- Surface must be free of irregularities and voids over 1/8 inch in diameter or width.
- All Corners, right angles, drains, and penetrations should be cleaned and/or repaired prior to application.
- Substrate should be examined for moisture content.
- Any questionable substrate should be spray tested and examined after curing or contact your distributor about any questionable substrates.
- Always address all detailing work prior to the start of the spray application to reduce labor and material waste. The most common areas where detailing work will be required are around seams, irregularities in the substrate, curbs, vertical transitions, penetrations and corners.
- Failure often occurs in these detail areas, so it is critical that these are addressed with care since they have a large impact on the outcome of the entire project.
- If the product is used in excess around these detail areas then shrinking will occur along with small cracks that may cause the membrane to leak.
- Surfaces not prepared as specified above may void any warranty and/or require site approval from **Instacoat** personnel.
- Adequate drainage fall should be specified at no less than the industry minimum requirement or at least 1.5% without ponding.

General Guidelines for Detail Work

Detailing Outside Corners, Pipe Penetrations, Seams, Drains, and Curbs

- Detail surfaces must be clean and free of debris. The surface must be free of wax, oil, and other containments. The surface must offer an unpolished, non-slippery, fine textured uniform base. Proper surface prep may require sanding, de-oiling, de-waxing, laitance removal, etching, shot blasting, blast cleaning, crack filling, remedial fill topping, or adhered grade topping, as necessary.
- Apply a 60 mil membrane using trowel grade, roller/brush grade, or spray grade ensuring that you apply in multiple directions to eliminate any air pockets and ensure even coverage.
- Apply polyester fabric reinforcement over the membrane.
- Apply a second coat of trowel grade, roller/brush grade, or spray grade on top of the polyester fabric in the same manner as stated above.
- Allow 12 hours of cure time.
- If using spray grade it is critical that you apply the reinforcement fabric and the second coat prior the release of water from the first coat. If the water releases on the first coat prior to the application of the reinforcing fabric it must be allowed to dry prior to the application of the reinforcing fabric the second coat.
- If using spray grade ensure to protect the surrounding areas from over spray.

Notes

- Outside corners or curbs must extend a minimum of 3 inches onto the substrate. (Roof Deck)
- Pipe penetrations must extend on to the substrate and pipe a minimum of 2 times the diameter of the pipe.
- When applying the first coat form a 1 inch cant around the perimeter of a pipe penetration.
- Seams must extend a minimum of 3 inches on either side of the seam.
- Drains must extend a minimum of 3 inches on to the substrate and a minimum of 1 inch into the drain.
- Drain outlets must be special flanged outlets that are specifically designed for a membrane system and incorporate mechanical sealing against any backpressure.
- The outlets should be located at no more than 3 inches and be of size and capacity to adequately evacuate the maximum expected water drainage load to meet local government and national standards.
- Metal or PVC pipes and flashings my require sanding, etching, or priming prior to detailing.

Detailing Inside Corners

- Apply Trowel grade to the corner forming a minimum of a 1 inch cant in the corner where the two surfaces meet.
- A mechanical cant (wood, metal, foam) may be used. Apply these cants according to the manufacturers recommendations.

Detailing Control or Expansion Joints.

- Detail surfaces must be clean and free of debris. The surface must be free of wax, oil, and other containments. The surface must offer an unpolished, non-slippery, fine textured uniform base. Proper surface prep may require sanding, de-oiling, de-waxing, laitance removal, etching, shot blasting, blast cleaning, crack filling, remedial fill topping, or adhered grade topping, as necessary.
- Apply a suitable bond breaker (paper, wax, etc.) over the joint extending a minimum of 2 inches and a maximum of 3 inches beyond the joint.
- Apply a 60 mil membrane extending a minimum of 6 inches beyond the bond breaker using trowel grade, roller/brush grade, or spray grade ensuring that you apply in multiple directions to eliminate any air pockets and ensure even coverage.
- Apply polyester fabric reinforcement over the membrane.
- Apply a second coat of trowel grade, roller/brush grade, or spray grade on top of the polyester fabric in the same manner as stated above.
- Allow 12 hours of cure time.

- If using spray grade it is critical that you apply the reinforcement fabric and the second coat prior the release of water from the first coat. If the water releases on the first coat prior to the application of the reinforcing fabric it must be allowed to dry prior to the application of the reinforcing fabric the second coat.
- If using spray grade ensure to protect the surrounding areas from over spray.

Important factors to consider:

- Excess product (160 – 200 mils) is not going to perform any better than an 80 mil – 120 mil system.
- A thorough cleaning of the detail area is a must. It is important that the area be free of all greases, oils, and any loose material.
- Spraying at the proper angles will reduce cracking and the roll over effect.
- Detail work is critical to the outcome of the project. This is where most failures of any type of system most commonly occur.
- Cover flashings, masonry capping and damp courses play an equally important part in keeping a building waterproof and are part of the applicators responsibility.

Spraying Techniques

- The membrane shall be spray applied in a liquid form to an instant set and air cured to form a seamless membrane.
- This coating will release the water carrier contained in the emulsion in uniform pattern.
- The application will be done using a plural component system approved by **Instacoat** personnel.
- Spraying techniques will be demonstrated and understood a lot clearer in the physical training session of the **Instacoat Certification Training Program**. Some important factors must be understood and remembered.
- The two products must mix prior to the material hitting the surface. If the product is not mixed prior to hitting the surface it will result in a layering effect on the end product.
- The product is to be applied with a spray pattern perpendicular to the surface requiring the membrane. **Do not** spray at an angle to the surface this will result in uneven coverage.
- Instacoat shall be applied with a minimum of 2 passes in each direction to obtain desired thickness.
- Only work an area that the applicator can reach, typically 4' x 3' area, this will keep the applicator from having to reach thus changing the angle of the spray pattern.
- Each passes must overlap the previous pass a minimum of 1 inch. Too much overlap will result in uneven coverage and a waste of material.
- It is not advised to spray excess material into internal or exterior corners or angles. This also applies to the detail work. Excess material in these areas may cause excessive stress to the membrane while curing.
- The standard curing time is 72 hours at 70 F with 50% relative humidity.
  - This will very depending on temperature and humidity.
- When spraying always start at the lowest point and work your way to the highest point. This is required due to the curing nature of the product.
- When spraying in high winds the system needs to be facing into the wind. Extra precaution should be taken as in any spray application to avoid over spray.
- Identifying the correct tips for each application. There are various size tips, which can be used for different applications.
- The most important factor is to make sure that the tip sizes for both part A and part B are calibrated in accordance with the correct ratio of the system.
- Ratios are shown in the calibration table on page 6.
- The first two numbers represent the angle of the fan pattern and the second two represent the gallons per minute (GPM).
  - 6515 tip - 65 degree angle with 1.5 GPM
  - 4015 tip - 40 degree angel with 1.5 GPM
- When spraying in large areas, tips up to a 65-degree angle may be used.
- When spraying in detail areas tips, up to a 40 degree angle may be used.
- When spraying in hard to reach area, tips as small as a 4008 may be used.

Spraying Techniques of Details

- When applying the product to detail areas it is important to understand the product and its characteristics.
- The solution to detailing work is definitely not to apply excess material to these areas as this will only result in excess shrinking of the product and small cracks will appear that may cause the membrane to leak. See the application diagrams.
- If detail work is done correctly and according to specification, the thickness should be consistent throughout.

Repairs

- If the membrane is damaged it shall be repaired after the damaged area has been trimmed and cleaned in one of the following manners:
  - Spray grade:
    - ♦ Repeat the application process and overlapping the damaged area a minimum of 2 inches.
  - Trowel and Roller/Brush grades

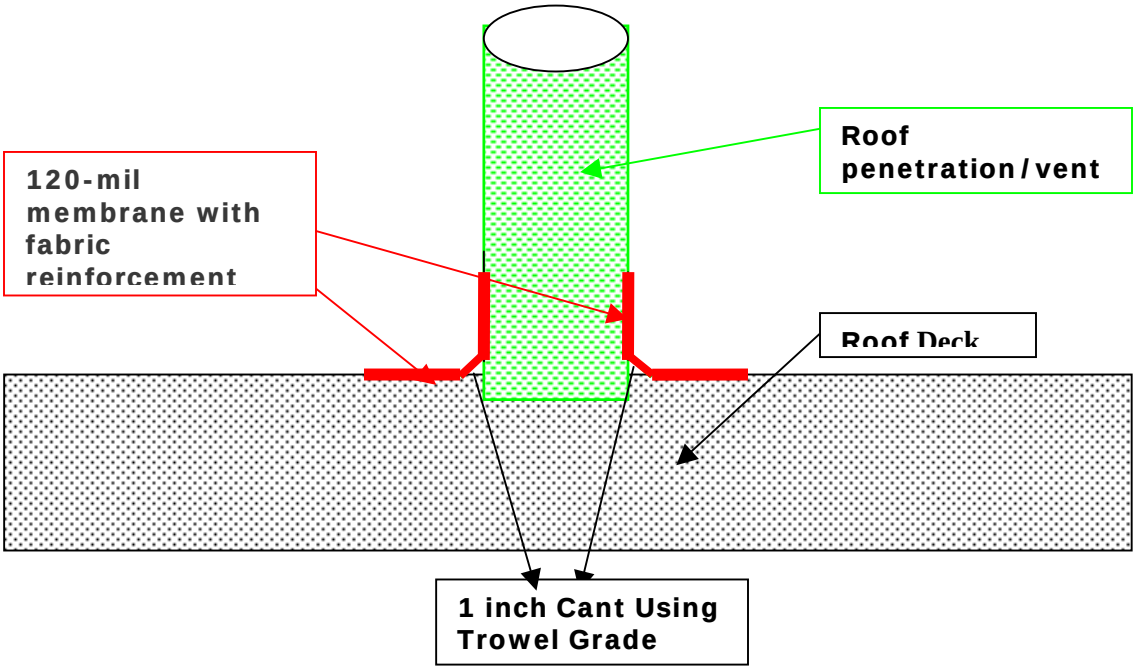
- ♦ Apply in two 60 mil coats overlapping the damaged area a minimum of 2 inches with reinforcement fabric between coats.

Too much is *NOT* the answer

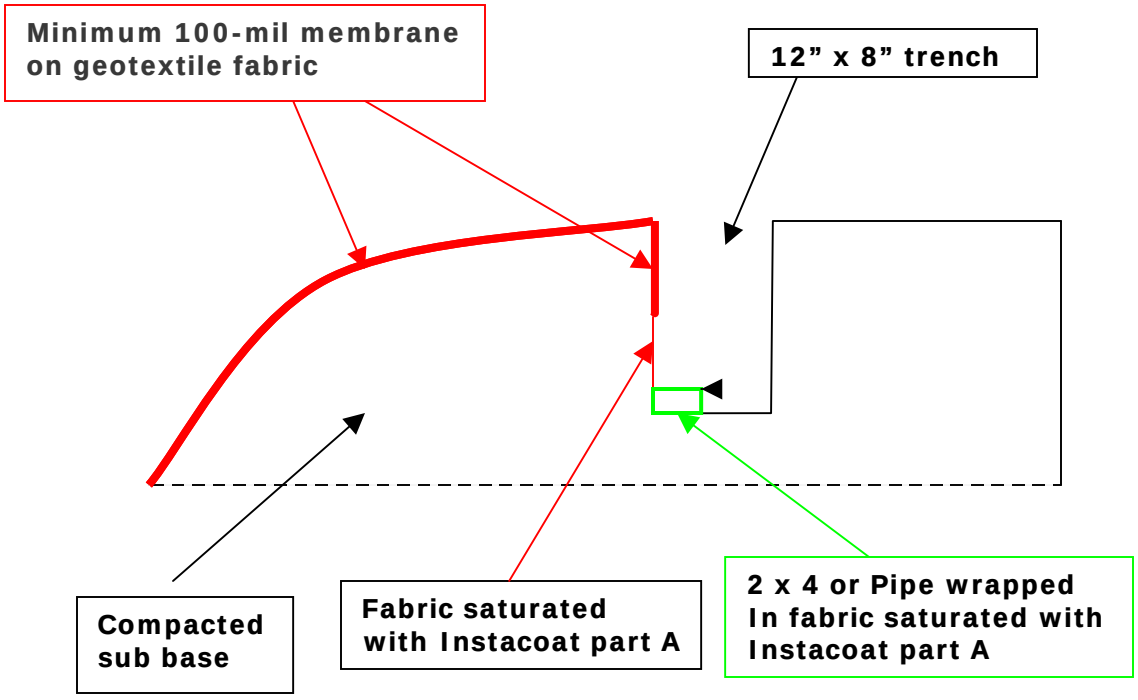
- Excess product is not the answer to solve all problems. In most cases 80 mil cured is more than adequate to provide a waterproofing membrane.
- This may differ from job to job; if in doubt call your **Instacoat** distributor.

Detail Diagrams *(See page 10 and 11 for details)*

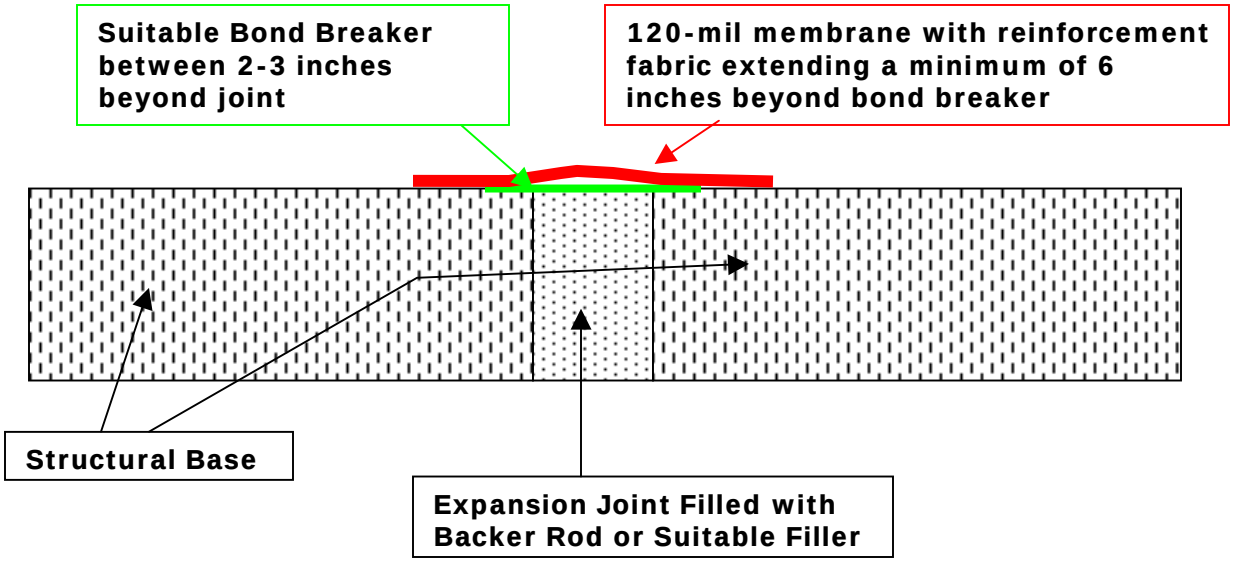
Preparation of Vent, Drain, or Pipe Penetration



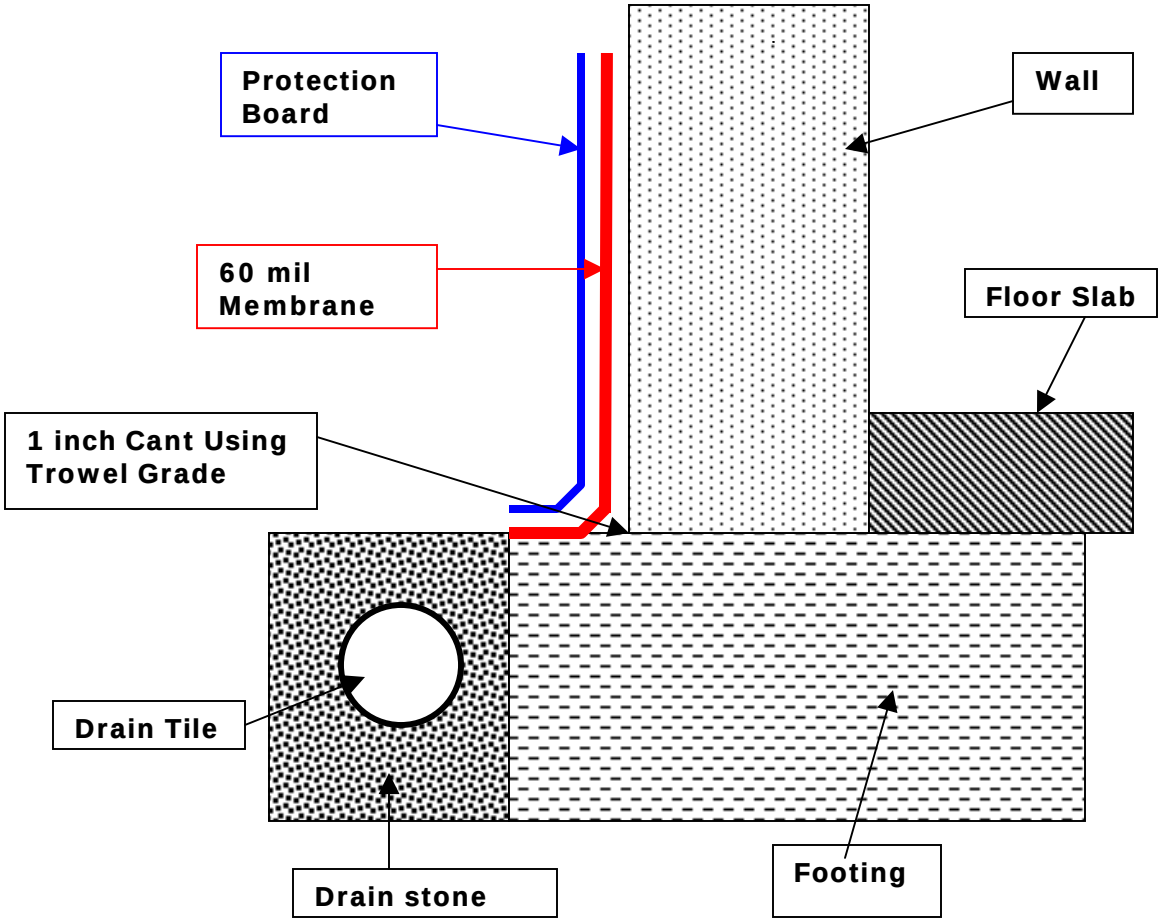
Membrane on Sub Base



Expansion Joint Detail



Basement or Substructure Waterproofing



Coverage Rates

Instacoat Coverage Rates 4015 Tip

Mil Dry	Mil Wet	SQFT Gallon	Gallons Square	
40	48	32.0	3.1	
45	54	28.4	3.5	
50	60	25.6	3.9	
55	66	23.3	4.3	
60	72	21.3	4.7	Waterproofing
65	78	19.7	5.1	
70	84	18.3	5.5	
75	90	17.1	5.9	
80	96	16.0	6.3	Minimum Roof
85	102	15.1	6.6	
90	108	14.2	7.0	
95	114	13.5	7.4	
100	120	12.8	7.8	Pond Liner
105	126	12.2	8.2	
110	132	11.6	8.6	
115	138	11.1	9.0	
120	144	10.7	9.4	
125	150	10.2	9.8	
130	156	9.8	10.2	
135	162	9.5	10.5	
140	168	9.1	10.9	
145	174	8.8	11.3	
150	180	8.5	11.7	
155	186	8.3	12.1	
160	192	8.0	12.5	
165	198	7.8	12.9	
170	204	7.5	13.3	
175	210	7.3	13.7	
180	216	7.1	14.1	
185	222	6.9	14.5	
190	228	6.7	14.8	
195	234	6.6	15.2	
200	240	6.4	15.6	

Instacoat Coverage Rates 4008 Tip

Mil Dry	Mil Wet	SQFT Gallon	Gallons Square
40	52	28.0	3.6
45	59	24.9	4.0
50	65	22.4	4.5
55	72	20.4	4.9
60	78	18.7	5.4
65	85	17.2	5.8
70	91	16.0	6.3
75	98	14.9	6.7
80	104	14.0	7.1
85	111	13.2	7.6
90	117	12.4	8.0
95	124	11.8	8.5
100	130	11.2	8.9
105	137	10.7	9.4
110	143	10.2	9.8
115	150	9.7	10.3
120	156	9.3	10.7
125	163	9.0	11.2
130	169	8.6	11.6
135	176	8.3	12.1
140	182	8.0	12.5
145	189	7.7	12.9
150	195	7.5	13.4
155	202	7.2	13.8
160	208	7.0	14.3
165	215	6.8	14.7
170	221	6.6	15.2
175	228	6.4	15.6
180	234	6.2	16.1
185	241	6.1	16.5
190	247	5.9	17.0
195	254	5.7	17.4
200	260	5.6	17.9

Limitations

Heat
- The product exhibits a softening point at 203 F. Heat exposed surfaces generally are required to be overlaid with reinforcement fabric that serves the additional affect of controlling the “self annealing” effect to the surface, thereby permitting rapid full cure.

Shrinkage
- Shrinkage is the byproduct of all fluid applied coatings with less than 100% solids content. The need to limit the stress caused by shrinkage is the reason that the product is not to be applied at a thickness greater than 200 mils dry without reinforcement fabric as a cure shrinkage control and stress distribution medium.

Continued Pressure
- Wherever the product is exposed to the possibility of continuous fluid pressure the high elasticity of the product permits it to gradually yield to that pressure. The ballooning and rupturing that could result is overcome by the incorporation of reinforcement fabric and/or under support that is designed according to its required maximum elongation and tear resistance.

Self-Adhesion
- Self-adhesion is the characteristic that offers the product its high bonding power to most substrates. This characteristic applies equally to the clean exposed surface of the membrane; therefore design should include separation sheeting wherever substrate movement might permit the membrane surface to fold and self-contact, or adhere to any overlay that might be caused to move differently to the substrate.

Plant Growth
- The product does not contain any toxins, chemicals, or salts that are injurious to mammal, marine, or plant life. Therefore the application over seed could result in plant growth ultimately puncturing the membrane. A specific application may incorporate herbicides to address this issue.

Catalyst
- The catalyst released from the curing membrane contains solutions that may be rinsed off to avoid contaminating adjacent surfaces that are yet to be finished, painted, or over coated.

Bleeding
- The product is not prone to the release of bitumen emollient oils because of its high content of encapsulate latex. Nonetheless it is inadvisable to directly glue apply light colored grouted tiling in potentially hot areas.

Removal
- The removal of the product is extremely difficult without undercutting the membrane.

Environmental and Safety Concerns

The **Instacoat System** is a state of the art product that is safe for both the environment and you. It consists of two stable, non-toxic and non-flammable liquid components. These components present no danger in transportation, storage, during application, or after application. The **Instacoat System** may be universal used wherever there is a need for an impermeable membrane, gas proofing, gas and water vapor barrier, and corrosion control.

The Instacoat System is cold applied by a spray system that requires no priming. Materials normally used in other sheet membrane, acrylic, urethane, hot applied, etc. are toxic and emit numerous kinds of volatile organic compounds (VOC). The advantages to this system in the area become extremely important for both the environment and for safety reasons. You will not find any offensive fumes such as you find in a torch or hot kettle applications.

There are no boxes, release papers, or material waste in the entire process. Packaging for the system is reusable totes or drums so the system does not intrude on the environment and eases the burden on landfills.

Because of the systems quick application process it may also be used to contain hazardous waste or chemical spills in the form of secondary containment. The product is useful in several other ways by preventing vapors or liquids from escaping or entering such places as tunnels, dams, sewage, leaching operations, landfill sites, mines, tanks, and tailing ponds.

The acceptance of solvent based products is becoming increasingly limited in light of the clean air campaigns recently adopted by many governments. Section 183(e) of the US Clean Air Act limits the VOC emissions from architectural coatings. Similarly, Proposition 65 is a program by California's EPA to identify and outlaw toxic materials. Instacoat is non-toxic and does not emit any VOC's thus enabling it to conform to the new policies of numerous government agencies.