



INSTALLATION PROCEDURE FOR PIPING UNDERWATER APPLICATION

Aquawrap® - G-03 Fabric and G-05 Fabric types

1. READ AND UNDERSTAND ALL MSDS's FOR THESE PRODUCTS PRIOR TO HANDLING OR INSTALLING THEM. CHEMICAL GLOVES AND SAFETY GLASSES ARE MANDATORY.
2. Clean as appropriate. See Surface Preparation Procedure instructions (separate document.)
3. All sharp corners, dents, corrosion pits, leak repairing patches and wall/diameter offsets greater than 1/8th-inch (3mm) (1/16th-inch for fluid-tight installations) should be smoothed with a high compressive and high flexural strength filleting and filling compound, such as Bio-Dur 561 or Bio-Fix 911. Most circumferential piping welds and the like require no special filleting or smoothing.
4. Apply primer. FACS 563 at 30 mils for steel substrates or BP-4 at 40 mils for wood and concrete. For good results with FACS 563 use a stiff short haired edge trimming pad; use mitts with BP-4. Press and smear primer to displace water on the substrate. Allow to cure a minimum of 1 hour before wrapping(next step). Refer to data sheets for more information.
5. Tear open the foil pouch that the Aquawrap is shipped in and remove any inner wrapper.
6. Press the end of the roll down onto the pipe surface to be wrapped. An assistant should hold this starting point in tight contact with the pipe.
7. Proceed to pull significant tension on the roll and wrap it around the pipe until the requisite number of layers is applied. If any part of the installation is above the water line thoroughly spray with water, on **EVERY** layer, as it is being wrapped. For coverage that is more than a single width of the Aquawrap, it is often found that a bias wrapping method works best, with no overlap of the adjacent wraps; and then biasing back on the opposite angle as each succeeding layer is installed. Keep tension at all times.
 - **Exceptions:** a). When passing around or over obstructions, relax the tension while pressing downwards into the repair surface. Continue on around and do not start pulling tension again until you are certain that you are not pulling the Aquawrap off of the obstruction. Apply extra layers in these regions. b). When transitioning from a large diameter down to a smaller diameter (for example, a concentric reducer) do not pull tension in the area of the transition, or the Aquawrap will slip off of the larger diameter.
8. As a roll is used up and a new one is begun, lap the new starting point back over the previous roll's end by a distance equal to at least the width of the Aquawrap product being applied.
9. Above the water line: While wrapping, tiny droplets of water should be visible squeezing through the weave of the Aquawrap fabric. If at any time there is a lack of such droplets visible, more activating water should be misted over the Aquawrap surfaces.
10. If wrapping is interrupted, and the applied material cures, BP-4 Primer should be applied to cured surfaces before continuing with wrapping.
11. Tack the termination of the final layer of the final roll to the composite structure with Stricture Banding™. Apply the first wrap of Stricture Banding™ smoothly and with only slight tension; subsequent layers should be tightly stretched while wrapping.
 - For areas of diameter transition (see Exceptions, above) the Stricture Banding™ should be applied first, tightly, only to the large diameter. A very light tension must be used in the actual transition area; followed by a full tension application in the smaller diameter area. Special techniques are available to overcome this situation where warranted. Contact Air Logistics Technical Support for details.
12. Perforate the surfaces of Stricture Banding using any suitable pointed object, such as the Perforator Tool, available from Field Applied Composite Systems, LLC
13. When cured to the touch, remove all Stricture Banding. After the installation is fully dry (about 6 hours at 50%RH), coat all Aquawrap surfaces with BP-4(*if underwater repair will not be exposed to UV, this step may be omitted*).