

Installation Procedure

The FURS Protect 1100 Series Products are a specialty designed fiberglass reinforced fabric that is pre-impregnated with a water activated resin system. The *Products* are developed to add mechanical protection, hoop strength and structural support to extend the life of structures and piping assets. The *FURS Protect 1100 Series Products* is applied directly out of the bag and requires no additional mixing.

Materials & Tools:

- Compression Wrap
- Rubber Gloves (heavy duty)
- Spray Bottle w/ water
- Scissors
- Surface Preparation materials:
Wire brush/power wire brush or grit blaster, abrasive paper (40-80 grit)

SURFACE PREPARATION: (Shall be carried out thoroughly)

1. All surfaces shall be cleaned of mud, mill lacquer, wax, tar, oil, grease or other foreign contaminants to Solvent Clean SSPC-SP1 requirements, using an Oil Free Solvent (Acetone, Denatured Alcohol, and Isopropyl alcohol).
2. Surface preparations shall extend 6" past the Field Joint Coating edges or over the entire area to be protected.
3. Sweep blasting should result in a 25 to 75 microns (1 to 3 mil) profile.
4. If a sweep blast is not an option, roughen the existing coating with 60 to 80 grade grit paper to create a profile.
5. After profile is created, thoroughly clean prepared area to remove any dust or contaminants.
6. Holiday testing may be done at this time to ensure that no coating has been damaged in the preparation process. If coating damages are found, follow coating manufacture repair guidelines.

Following completion of above surface preparation:

1. Mark area to be wrapped.
 - i. When wrapping the FJC, extend wrapping 6"+ on leading edge (direction pipe is to be pulled) and 4"+ on trailing end.
2. Spray area with water that is to be wrapped with **FURS Protect**
3. Remove **FURS Protect** product from sealed packaging. (product shall only be removed immediately prior to installation. Please note: Exposure to elements will start the curing process. Working time is limited once packaging is open)

Three Application processes to choose from, (depending on level of protection desired)

Wrapping Process 1:

50% overlap starting on the trailing end and wrapping in direction of pipe to be pulled.

Wrapping Process 2: (recommended)

75% overlap (to create 4 layers of protection) starting on the trailing end and wrapping in direction of pipe to be pulled.

Wrapping Process 3:

50% overlap starting on leading edge and wrapping down and then back. Wrapping both directions creating a 4 layer system.

If Wrapping Process 1 is Chosen:

- ⇒ Start on the trailing edge, 4" past FJC, and apply the first wrap circumferentially around the pipe at a 90° angle, then begin spiral wrapping with a 50% overlap towards the other edge. Apply tension during application.
- ⇒ Continue spraying wrap with water thoroughly wetting product during application.
- ⇒ Complete wrapping 6"+ past end of FJC on leading edge. End with straight circumference wrap.

If Wrapping process 2 is Chosen: (recommended)

- ⇒ Start on the trailing edge and apply the first wrap circumferentially around the pipe at a 90° angle, then begin spiral wrapping with a **75% overlap** towards the other edge. Apply tension during application.
- ⇒ Continue spraying wrap with water thoroughly wetting product during application.
- ⇒ Complete wrapping 6"+ past end of FJC on leading edge. End with straight circumference wrap.

If Wrapping process 3 is Chosen:

- ⇒ Start on the leading edge and apply the first wrap circumferentially around the pipe at a 90° angle, then begin spiral wrapping with a **50% overlap** towards the other edge. Once reached end of wrapping area, wrap back towards starting point continuing with 50% overlap. Apply tension during application.
- ⇒ Continue spraying wrap with water thoroughly wetting product during application.
- ⇒ Complete wrapping 6"+ past end of FJC on leading edge. End with straight circumference wrap.

Once wrapping is completed, IMMEDIATELY, wrap compression film over FURS Protect.

- ⇒ Wrap compression material in the same direction as spiral wrapping of the FURS Protect was installed.
- ⇒ Wrap film with TENSION starting and finishing a min of 6" past the end of the FURS Protect.
- ⇒ Compression film to be a thickness of 4 layers. (2 passes at 50% overlap or 1 pass at 75% overlap)
- ⇒ Perforate compression film to allow for gassing. Holes shall be poked in compression film every few inches and shall not extend past the film into underlying coatings.
- ⇒ Compression film may be removed after curing of FURS Composite has occurred.

FURS Composites

PO Box 896094

Charlotte, NC 28289-6094

www.FURScomposites.com

888-611-1323

johnglass@FURScomposites.com



FURS Composites is dedicated to manufacturing the highest quality products for the repair and protection of energy & industrial infrastructures. We are committed to ensuring that our customers receive products that meet or exceed their quality requirements.