

**PRODUCT DESCRIPTION**

The FPJ™ is a Fiber-glass Protective Jacket that is used as a stay-in-place form in structural pile repair and protection system. When used with our specialty underwater grouts, this system allows repairs to be made to concrete, wood and steel structures that are submerged or in tidal zones. The custom-made FPJ™ jackets are available in a variety of shapes and sizes.

**PRODUCT FEATURES**

- Increased the axial strength of piles
- Increased flexibility and impact resistance
- A corrosion-free system prevents deterioration, weathering & erosion
- Chemical durability
- High electrical resistance
- Durability
- Shock resistance
- Produccible in different shapes and sizes
- UV protection
- Reduce maintenance costs
- Suitable for marine environments
- Repair damage in place
- Lightweight, making it easier & safer to handle
- Full composite construction

**PRODUCT USES**

The FPJ™ is suitable for use with all concrete, steel and timber piles. Can be used with cementitious or epoxy grouts, gels, corrosion inhibitors and concrete aggregates. The FPJ™ jacketing systems can be assembled quickly above or in the water to significantly reduce labor, dive and equipment costs.

- Repair and protection of marine structures
- Pile repairs
- Underwater grouting applications
- Utility pole repairs
- Seawall repairs

**TECHNICAL DATA**

|                           |              |
|---------------------------|--------------|
| Flexural Strength         | 172 MPa      |
| Flexural Modulus          | 4826 MPa     |
| Ultimate Tensile Strength | 103 MPa      |
| Barcol Hardness           | ≈45          |
| Water Absorption          | Less than 1% |

**Physical Properties - FPJ™**

|                     |                                     |
|---------------------|-------------------------------------|
| Material Type       | Fiber-glass                         |
| Available Thickness | 3mm,5mm,7mm                         |
| Shape               | Square, H-piles, Octagonal & Custom |
| Color               | Translucent Yellow                  |



Fiber-glass Protective Jacket - FPJ™

**HOW TO USE**

**SURFACE PREPARATION**

All surfaces must be sound and free of loose rust, marine growth, oil, and other contaminants. To confirm the stability of the structure during the restoration process, consult with a qualified professional engineer before attempting any structural repairs.

**APPLICATION**

Fiberglass surfaces must be sound, clean, and free of all contaminants that could impair product adhesion or performance. Install Spacers to the inside of the jacket using flexibilized epoxy adhesive. Place a bead of adhesive from a gel paste epoxy cartridge using an epoxy dispensing tool into the female portion of the tongue-and-groove joint. Pull the jacket open and place around the pile, engaging tongue-and-groove joint(s), and then secure the jacket with ratchet strap(s). Position the jacket over the repair area so that the jacket's length allows 450 mm to 610 mm of undamaged pile above and below the damaged area. Secure the tongue-and-groove joint with stainless-steel self-drilling, self-tapping type stainless-steel screws along the center of the tongue-and-groove joint every 150 mm on center. Install external bracing to prevent jackets from bulging during placement of filler materials.

**LIMITATIONS**

- Design calculations must be achieved by a professional company
- Concrete deterioration and steel corrosion must be resolved prior to application
- Do not overfill
- Install proper bracing
- Underwater placement should be attempted only by certified and experienced professional drivers
- Do not apply the FPJ™ system to surfaces below 4°C or above 35°

**CAUTION**

Users should observe good industrial and personal hygiene. The use of hardhats, proper footwear, and ear protection should be evaluated on a site-by-site basis. In situations where installation is occurring in water, flotation devices should be utilized. In general, installers of FPJ™ products should wear long-sleeve shirts and pants and use safety glasses/goggles and gloves to minimize skin contact. Measures such as washing after handling the material and before

eating, drinking, and/or smoking, as well as routinely washing work clothing and protective equipment to remove contaminants, should be employed. This system includes large molded articles which may be heavy and awkward to lift. Use proper lifting and handling techniques. The use of a respirator is not required during installation. However, if FPJ™ jackets or the cured epoxy product needs to be ground or cut, or if respiratory discomfort or irritation is experienced, respiratory protection should be worn.

**STORAGE**

FPJ™ Fiber-glass Protective Jacket should be stored in a dry, cool and rain-proof area.

**CLEANUP**

Dispose of material in accordance with local disposal regulations. Uncured material can be removed with approved solvents. Cured materials can only be removed mechanically.

**FIRST AID**

**Eye:** Flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses as needed. If you experience redness, burning, blurred vision, or swelling, seek medical advice.

**Skin:** Wash affected area with soap and water. If rash or irritation occurs, seek medical advice.

**Inhalation:** Remove affected individual to fresh air. Give oxygen or artificial respiration if needed. If individual continues to experience difficulty breathing, seek medical advice.

**Ingestion:** Ingestion is unlikely. If swallowed, rinse mouth immediately. DO NOT INDUCE VOMITING. Seek medical advice.

**DISCLAIMER OF LIABILITY**

AFZIR, LLC warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within six months of the date of purchase.

AFZIR shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory.

The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production.