## DESCRIPTION
The FX-70 high-strength fiberglass protective jacket is a fiber-reinforced plastic (FRP) composite that is used as a stay-in-place form in the FX-70 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 without constructing costly cofferdams. The custom-made FRP jackets are available in a variety of shapes and sizes.

## WHERE TO USE
- Repairs and protection of marine structures
- Pile repairs
- Underwater grouting applications
- Utility pole repairs
- Pile splicing/extensions
- Seawall repairs

## FEATURES
- Repair damage in place, with no need to dewater or take the structure out of service
- Corrosion-free system prevents deterioration, weatherizing and erosion
- Accommodates piles of various shapes and sizes – round, square, H-Piles, or custom shapes
- Suitable for marine environments

## PRODUCT DATA
### Generic Description
Fiberglass composite

### Available Shapes and Sizes
- Thickness – ¼”, ⅜”, ⅛”
- Shapes – round, square, H-Piles, octagonal, and custom

### Available Colors
- translucent and gray

## TECHNICAL INFORMATION
### Flexural Strength
ASTM D790
- 25,000 psi 172 MPa

### Flexural Modulus
ASTM D790
- 700,000 psi 4,826 MPa

### Ultimate Tensile Strength
ASTM D638
- 15,000 psi 103 MPa

### Barcol Hardness
ASTM D2583
- 45± 7

### Water Absorption
ASTM D570
- Less than 1%
APPLICATION INSTRUCTIONS

More comprehensive FX-70 structural pile repair and protection system installation instructions are available; please refer to the FX-70 Structural Piling Repair and Protection System Installation Guide PDF at strongtie.com/products/rps/fx70.

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.

Concrete: Prepare surface by high-pressure water-blasting or other mechanical means to meet ICRI Guideline 310.2R CSP 3-6. Mechanically remove unsound concrete in the damaged area to provide a minimum concrete surface profile CSP 6, per ICRI Guideline 310.2R. Repair or replace any reinforcing steel as determined by a qualified professional engineer.

Steel: Prepare surface by high-pressure water-jetting or other mechanical means necessary to meet SSPC-SP12/ NACE 5 WJ-4. Repair or replace any structural steel elements with excessive section loss as determined by a qualified professional engineer.

Wood: Prepare surface by high-pressure water-blasting or other mechanical means necessary to achieve a sound surface, free of all contaminants.

Fiberglass Jackets: Fiberglass surfaces must be sound, clean, and free of all contaminants that could impair product adhesion or performance.

JACKET PREPARATION

Install FX-Spacers to the inside of the jacket using FX-523 flexibilized epoxy adhesive.

Place a bead of adhesive from an FX-70TNG Tongue-and-Groove Adhesive Cartridge using a ADT30 Manual 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 18” (457 mm) to 24” (610 mm) of undamaged pile above and below the damaged area.

Secure the tongue-and-groove joint with FXSSST121 316 Stainless-Steel Screws, self-drilling, self-tapping screws along the center of the tongue-and-groove joint every 6” (152 mm) on center.

Install external bracing to prevent jackets from bulging during placement of filler materials.

LIMITATIONS

- Do not overfill.
- Install proper bracing.
- Underwater placement should be attempted only by certified and experienced professional divers.
- Do not apply the FX-70 system to surfaces below 40°F (4°C) or above 95°F (35°C).
- All submerged forms should be installed by certified professional divers. All forms must be sealed appropriately to prevent grout leakage during installation.
CAUTION
The Simpson Strong-Tie FX-70 system includes a number of individual products; detailed health and safety information for each product can be found on product Safety Data Sheets (SDS) available at strongtie.com/sds. Information on Personal Protective Equipment (PPE) is provided to assist installers/employers in complying with OSHA regulations found in 29 CFR. Each individual jobsite will have its own health and safety considerations with regards to the type and number of hazards as well as any local or state regulations that may apply. 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 FX-70 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. Proper lifting and handling techniques. The use of a respirator is not required during installation. However, if FX-70 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.

FIRST AID
Eye Contact: 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 Contact: 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.

CLEAN-UP
Spill/Release and Clean-up Procedures: Avoid processes that result in the creation of dust. In the case of the creation or spill of process dust, avoid dry sweeping. Use water spraying/flushing or ventilated or HEPA filter–vacuum cleaning system. If those methods are not available, gently moisten dust before collection with shovel or broom.

LIMITED WARRANTY
This product is covered by the Simpson Strong-Tie RPS Product One-Year Limited Warranty, which is available at strongtie.com/limited-warranties or by calling Simpson Strong-Tie at (800) 999-5099.