Technical Data Sheet
TDS-872-01025

FPJ™

Fiberglass Protective Jacket

Building & Transportation | Oil, Gas & Industrial | Offshore & Onshore | Water & Wastewater

PRODUCT DESCRIPTION

The CTech-LLC® FPJ™ is a high-strength fiberglass protective jacket that is used as a stay-in-place form in the LifeShield™ 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. FPJ™ fiberglass protective jacketing is a fast and easy to install pile rehabilitation jacketing system designed to become an integral part of the repaired structure. The FPJ™ jackets have been engineered and proven to provide a strong, durable encapsulation of the pile repair and protective annulus materials. Incorporating the innovative Fiberglass Composite Jacketing joining technology, the FPJ™ system provides fast and easy installation and ease of pumping operations. The CTech-LLC® FPJ™ provides a permanent long-term protection of the repair from the harshest marine environments.

ADVANTAGES

- Rapid Installation.
- Suitable for any size and profile pile in marine or dry locations.
- Lightweight, making it easier and safer to handle.
- High quality material providing outstanding durability and strength.
- Long life repair giving reduced ongoing maintenance costs.
- Full composite construction - no metallic parts or requirements for cathodic protection.
- Translucent color to enable visual during pumping operations Also available in other colors to suit.
- 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.

TYPICAL USES

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 Fiberglass Composite Jacketing systems can be assembled quickly above or in the water to significantly reduce labor, dive and equipment costs Strengthen for increasing load capacity.

- Repairs and protection of marine structures.
- Pile repairs.
- Underwater grouting applications.
- Utility pole repairs.
- Pile splicing/extensions.
- Seawall repairs.

INSTALLATION PROCEDURE

Fiberglass protective jacketing systems are available in any multiple diameters, thicknesses or profiles and any length required. The length of Fiberglass Composite Jacketing is engineered to be easy to handle yet strong and durable for long-term durability. Custom sizes can be manufactured to suit specific requirements. Single pump operations are possible without the use of straps or braces in most applications dependent on head height, density of grout/filler material and local site conditions.

PREPARATION OF SUBSTRATE

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.

Mechanically remove unsound concrete

in the damaged area to provide a

minimum concrete surface profile. 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. 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.

TECHNICAL DATA

	Unit	ASTM	FPJ™
Flexural Strength	MPa	D790	172
Flexural Modulus	MPa	D790	4826
Ultimate Tensile Strength	MPa	D638	103
Barcol Hardness	-	D2583	45
Water Absorption	Percent	D570	Less than 1%

STORAGE & SHELF LIFE

Store material in a dry area with no exposure to moisture.

CAUTION

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 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.

CTech-LLC®
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IMPORTANT NOTE:
Before using any CTech-LLC® product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at www.ctech-llc.com.

WARANTY:
CTech-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 one month of the date of purchase. CTech-LLC® 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 utilizing.