

PRODUCT DATA

3 03 01 30 Maintenance of
Cast-In-Place
Concrete

APE TRANSLUCENT FRP JACKETS

Advanced pile encapsulation (APE) process

Description

The glass fiber reinforced polymer (FRP) jackets supplied by BASF Building Systems as part of the APE System are a marine grade laminate of glass woven roving and mat, impregnated with a clear, U.V. light-stabilized, polyester resin. The jackets are translucent to allow the progression of grout inside the jackets to be monitored from outside the jackets. The jackets being precisely molded to conform to the structure being encapsulated and come complete with grout injection ports and integral overlapping seams. Jackets are manufactured to specified thickness (1/8 inch [3 mm] minimum).

Where to Use

APPLICATION

- Use with APE Pile Grout to encapsulate piles, columns, beams and other structural elements
- Use with APE Pile Grout to form internal liners for penstocks, outfalls, manholes, tanks and similar structures
- Use with Set®, Masterflow® or Emaco® grouts by BASF Building Systems to complete repairs, similar to those specified above, where cement-based grouts are specified
- Combined with Set®, Masterflow® or Emaco® grouts to provide encapsulation of impressed current cathodic protection systems
- Use as permanent forms for underwater repairs where the benefits of translucency are indicated (form is left in place to provide long term protection and impact resistance to the repair)

How to Apply

Estimating

1. BASF Building Systems has a computerized estimating service available for owners, engineers and contractors who are contemplating the use of the Advanced Pile Encapsulation (APE) Process. Contact your BASF representative.

Installation

1. Inside surfaces of jackets should be lightly grit blasted to remove any dirt or residual mold release compounds immediately before installing stand-offs.
2. Stand-offs are adhered in the field by the contractor.
3. Bottom gaskets or seals are installed in the field by the contractor.
4. Jackets (forms) require temporary bracing during grout injection sequence. See hop drawings or project specifications for details.
5. Jackets used for encapsulations are topped off with a fillet of epoxy paste. See Shop Drawings or project specifications for details.
6. APE Process seam, bottom seal and stand-off adhesive is HYDROCOTE® 3061-I by BASF Building Systems.
7. APE Process top-off paste is HYDROCOTE® 1063 by BASF Building Systems.

Physical Properties

PLASTIC PROPERTIES

PROPERTY	REQUIREMENT
Ultimate Tensile Strength (ASTM D 638)	10,000 psi (69.0 MPa)
IZOD Impact Strength (ASTM D 256)	15 ft-lb/in (800 J/m)
Barcol Hardness (ASTM D 785)	30
Water Absorption (ASTM C 570)	1% max

Jacket Fittings

The jackets are manufactured with molded overlapping seams and molded upsets to receive bottom seal gaskets. The following are supplied with the jackets:

- Molded polymer injection ports
- Stainless steel rivets for securing jacket seams
- Fixed molded polymer stand-offs to maintain specified minimum grout thickness (standard)
- Adjustable polymer stand-offs for special applications (optional)
- Compressible bottom seal gaskets

Ultra-Violet (UV) Stability as Demonstrated by Accelerated Weather Tests

Samples of jackets subjected to 500 hours of exposure in Twin carbon Arc Weather-ometer (ASTM G 23, Type D) operated at 145° F (63° C) do not exhibit any chipping, flaking or peeling. Said tests are conducted in twenty (20) minute cycles, consisting of seventeen (17) minutes of arc light and three (3) minutes of water spray, through the 500 hour test duration.

For Best Performance

- To achieve maximum bond with encapsulation or repair grouts in underwater applications, local water conditions should be taken into account. Individual encapsulations or repairs should be completed in as short a time frame as possible to avoid build-up of marine bio-film.
- Contact your local BASF Building Systems representative for more information.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

APE TRANSLUCENT FRP JACKETS

Warning

APE Translucent FRP Jackets can have sharp edges. Wear gloves and eye protection when handling jackets. Use appropriate safety equipment and protection when grit-blasting.

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