

SUBSTITUTION REQUEST (During the Bidding/Negotiating Stage)

Project:	Substitution Request Number:
	From:
То:	Date:
	A/E Project Number:
Re:	Contract For:
Specification Title:	
Section: Page:	Article/Paragraph:
Proposed Substitution:	
Manufacturer: Address: Address:	Phone: Model No.:
	ons, drawings, photographs, and performance and test data adequate for evaluation of
Attached data also includes a description of changes installation.	to the Contract Documents that the proposed substitution will require for its proper
 Proposed substitution does not affect dimensions Payment will be made for changes to building substitution. 	g design, including A/E design, detailing, and construction costs caused by the
Submitted by:	
Signed by:	
Firm:	
Address:	
Telephone:	
A/E's REVIEW AND ACTION	
**	ance with Specification Section 01 25 00 Substitution Procedures. n accordance with Specification Section 01 25 00 Substitution Procedures. ed materials.
Signed by:	Date:
Supporting Data Attached: ☐ Drawings ☐ Pr	roduct Data



Striking the Right Balance for Optimum Performance

Through state-of-the art cross lamination technology, Barrier-Bac engineers have developed vapor barriers with the right balance between very low permeance and extremely high puncture resistance.

Features & Benefits

- Manufacture 11mil, 16mil, and 31mil Composite Vapor Barriers
- Exceeds ASTM E 1745 Class A, B and C Specifications
- · Manufactured in the USA

Our cross laminated products are manufactured with a proprietary blend of polyolefin resins. This technology produces a product that will maintain a very low permeance & an extremely high puncture resistance throughout the life of the structure.

Restricts migration of soil gases such as Radon and Methane.

VBC-350



The 31mil VBC-350 Composite Vapor Barrier creates a mechanical bond to 100% of the concrete slab. This ensures integral bonding of the vapor barrier to the concrete slab and eliminates separation of the vapor barrier from the bottom of the concrete.

VB-250 VB-350



The ribbed surface of VB-250 and VB-350 has much higher Coefficient of Friction (0.6) than the competitor's smooth surface (around 0.2 COF). It not only reduces the fall-down risk for workers walking on it, but also keeps wet concrete slabs more stably atop the ribbed surface.

White Bond Tape



Our 9-mil White Bond Tape is made with a synthetic rubber compound which provides excellent bonding in low temperature applications. With easy-tear edges and no release paper, this polyethylene pressure sensitive tape is easy to use on the job site.)

All of our products have been independently tested by a third party.

Optimum Performance = Increased Level of Protection on The Project

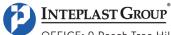


Product Specifications



	Test Standards/ Methods	VB-250 (11 mil)	VB-350 (16 mil)	VBC-350 (31 mil)
Classification	ASTM E 1745	Exceed Class A, B and C	Exceed Class A, B and C	Exceed Class A, B and C
Water Vapor Permeance	ASTM E 96, Procedure B	0.020 (US Perms)	0.007 (US Perms)	0.007 (US Perms)
Tensile Strength	ASTM E 154 (ASTM D 882)	50 lbf/in	83.75 lbf/in	136 lbf/in
Puncture Resistance	ASTM D 1709	2400 grams	3960 grams	5210 grams
Radon Diffusion	K124/02/95	2.5^(-11)m2/S	2.4^(-11)m2/S	2.4^(-11)m2/S
Methane Permeance	ASTM D 1434	-	90.59 cm3/(m2. Atm. day)	90.59 cm3/(m2. Atm. day)

Note: Information herein, to the best of our knowledge, are typical property values and intended as guides only. Inteplast Group makes no warranties as to the suitability for specific use of merchantability of products referred to, no guarantee, expressed or implied, is made as to product application for a particular use.



OFFICE: 9 Peach Tree Hill Rd., Livingston, NJ 07039

PLANT: 101 Inteplast Blvd., Lolita, TX 77971

TEL: 877-535-0555 FAX: 800-709-6002

E-MAIL: info@BarrierBac.com WEB SITE: www.BarrierBac.com



VBC-350 (31mil) Composite Vapor Retarder

DIVISION: 072600,033000

1.0 PRODUCT NAME

VBC-350 (31mil) Composite Vapor Retarder Class A Vapor Retarder Exceeds ASTM E 1745 class A, B & C Vapor Retarder Specifications

2.0 MANUFACTURER

Inteplast Group 9 Peach Tree Hill Rd. Livingston, NJ 07039 Technical Assistance Tel: (877) 535-0555 Fax: (800) 709-6002

3.0 PRODUCT DESCRIPTION

VBC-350 (31 mil) Composite is a high performance under slab vapor retarder developed for the construction industry to retard moisture migration through concrete slabs. It may also be used to control radon, methane, sulphates and many other soil contaminants. The ribbed side has much higher Coefficient of Friction (0.6) than the competitor's smooth surface (around 0.2 COF). The other side with geotextile fabric provides a mechanical bond with concrete when the fabric side facing concrete pour. This adhesion strength greatly improves slab protection from moisture migration by maintaining intimate contact with the slab. Typical uses include projects with unstable (expansive or alleviated) soil, void formed slabs and high water tables. It can also be used as a physical termite barrier.

3.1 COMPOSITION

VBC-350 (31 mil) Composite is manufactured to the highest standards with proprietary polyolefin resins. The manufacturing process for the Barrier-Bac VBC-350 (31 mil) Composite is a 16 mil, multi-layer, co-extruded, cross-laminated system. The membrane is then laminated with a 15 mil non-woven polypropylene geotextile.

Barrier-Bac VBC-350 (31 mil) Composite is manufactured in 6 ft × 150 ft rolls (900 ft²) and weighs approximately 94 lbs per roll.

4.0 TECHNICAL DATA

Applicable Standards:

ASTM, American Society for Testing & Materials

- ASTM E 1745 Standard Specification for Water Vapor Retarders used in Contact with Soil or Granular Fill Under Concrete Slabs.
- ASTM E 154 Standard Test Methods for Water Vapor Retarders used in Contact with Earth Under Concrete Slabs, on Walls, or as a Ground cover.
- ASTM D 1709 Standard Test Methods for Impact Resistance of Plastic Films by the Free Falling Dart Method.
- ASTM E 96 Standard Test Method for Water Vapor Transmission of Materials.
- ASTM D 882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
- ASTM E 1643 Standard Practice for installation of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs.

Table 1: Physical Properties of VBC-350 (31 mil) Composite Vapor Retarder

Peel Adhesion to Concrete	ASTM E 903	8 lbs / in
Tensile Strength	ASTM D 882	136 lbf/in
Puncture Resistance	ASTM E 1709	5210 grams
Water Vapor Permeance	ASTM E 96	0.007 perm (US)
Coefficients of Friction	ASTM D 1894	0.6
Elmendort Tear	ASTM D 1922	9,500 gram
Puncture-Propagation Tear	ASTM D 2582	20,000 gram
Life Expectancy	ASTM E 154	indefinite



VBC-350 (31mil) Composite Vapor Retarder

DIVISION: 072600,033000

4.0 TECHNICAL DATA (Continued)

- ASTM D 903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
- ASTM D 1894 Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting.
- ASTM D 1434 Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting.
- ASTM D 1922 Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method.
- ASTM D 2582 Standard Test Method for Puncture-Propagation Tear Resistance of Plastic Film and Thin Sheeting
- ACI, American Concrete Institute
- ACI 302.1 R-04 Minimum Thickness (10 mil)
- K124/02/95 Method To Test Radon Diffusion Coefficient in Radon-Proof Membrane.

5.0 INSTALLATION

Barrier-Bac VBC-350 (31 mil) Composite shall be installed with non-woven geo-textile facing up over tamped earth, sand or aggregate base by unrolling and completely covering area to receive building slab or specified area. Overlap all seams a minimum of 6 inches and seal with Barrier-Bac White Bond Tape. All penetrations must be sealed with Barrier-Bac membrane and Barrier-Bac White Bond Tape per manufacturer's recommendations. In order to get 100% Peel Adhesion strength to bond with concrete at the seams, it is suggested to use Barrier-Bac Double-Sided Termination Tape to tape the seam from inside. In case project design specifications require or it is needed to use additional adhesive to secure Barrier-Bac White Bond Tape, we recommend using 3MTM Scotch-Weld™ HoldFast 70 Cylinder Spray Adhesive Clear to apply on the geo-textile surface overlap prior

to tape application.

6.0 AVAILABILITY & COST

Barrier-Bac VBC-350 (31 mil) Composite is available nationally through our network of building supply companies. Please contact our corporate office for a distributor in your area. Barrier-Bac VBC-350 (31 mil) Composite is cost efficient. Pricing is obtained by contacting your local Barrier-Bac distributor or sales representative.

7.0 WARRANTY

We warrant and guarantee our specifications as published. Published test results are based upon accepted industry practice as well as the test methods called for and listed on our test documents. We believe, to the best of our knowledge, that our published results are accurate and reliable and that they represent our vapor retarder membrane. Inteplast Group cannot control site conditions and improper installation practices. Therefore, no warranty, expressed or implied, is given, including those of merchantability, fitness for a particular purpose or any other matter with respect to the product.

8.0 MAINTENANCE

No maintenance is required.

9.0 TECHNICAL SERVICES

Technical services for all of our products are obtained by calling our corporate office.

Corporate Office: (877)535-0555

10.0 FILING SYSTEMS

Barrier-Bac brochures are available from Barrier-Bac distributors, sales representatives, Inteplast Group, and on our web site: www.BarrierBac.com



OFFICE: 9 Peach Tree Hill Rd., Livingston, NJ 07039 PLANT: 101 Inteplast Blvd., Lolita, TX 77971

TEL: 877-535-0555 FAX: 800-709-6002

E-MAIL: info@BarrierBac.com

WEBSITE: www.BarrierBac.com / www.inteplast.com



White Bond Tape

DIVISION: 033000, 072600

1.0 PRODUCT NAME

Barrier-Bac White Bond Tape

2.0 SUPPLIER

Inteplast Group 9 Peach Tree Hill Road Livingston, NJ 07039

Technical Assistance tel: (877) 535-0555 fax: (800) 709-6002 www.barrierbac.com

3.0 PRODUCT DESCRIPTION

Barrier-Bac White Bond Tape is a polyethylene pressure sensitive tape which is white in color. This tape is made specifically to be used for seaming overlap joints of Barrier-Bac vapor barrier membrane.

As part of the Barrier-Bac Vapor Barrier systems, Barrier-Bac White Bond Tape is formulated to be installed in ambient temperatures of 32 degrees F to 150 degrees F and provides excellent bond-ing in both high and low temperatures.

3.1 COMPOSITION

Barrier-Bac White Bond Tape is a high tack tape offering a very high adhesive strength to seal vapor barrier seams. The adhesive is made with a synthetic rubber compound which provides excellent bonding in low temperature applications and will maintain a watertight seal in all weather conditions.

3.1 SIZE & PACKAGING

Barrier-Bac White Bond Tape is available in standard size of 4" x 150 '(96mm x 45.7M) per roll. Barrier-Bac White Bond Tape net weighs approxi- mately 2 pounds per roll.

12 rolls of Barrier-Bac White Bond Tape are packed in a case.

324 rolls Barrier-Bac White Bond Tape are on a pallet, 27 cases.

4.0 TECHNICAL DATA

Physical Properties of Barrier-Bac White Bond Tape

Property	Test Method	Value
Tensile Strength	ASTM D 3759	22.7 lbs/in
Elongation	ASTM D 3759	93%
Water Vapor Permeance	ASTM D-3833	0.080 US Perms
Peel Adhesion	ASTM D 3330	95 oz/in
Application Temp	Degree F	32 F to 150 F
Service Temp Range	Degree F	-10 F to 175 F
Thickness-		9 mils
Shelf Life		One year after shipment



White Bond Tape

DIVISION: 033000, 072600

5.0 INSTALLATION

- —All surfaces must be clean and dry.
- —Overlap seam edges of VB-250, VB-350 or VBC-350 vapor barrier, using a minimum 6 inch vapor barrier seam overlap, then apply Barrier-Bac White Bond Tape centered over the overlap joint.
- —Apply even pressure with a rubber roller to surface of seam tape and insure good initial adhesion.

6.0 AVAILABILITY & COST

Barrier-Bac White Bond Tape is available nationwide through our network of building supply companies. Please contact our corporate office for a distributor in your area. Pricing may be obtained by contacting your local Barrier-Bac Products distributor or sales representative.

7.0 WARRANTY

We warrant and guarantee our specifications as published. Published test results are based upon accepted industry practices as well as the test methods called for and listed on our test documents. We believe, to the best of our knowledge, that our published results are accu-rate, reliable and represent our white bond tape. Inteplast Group cannot control site conditions and improper installation practices. Therefore, no warranty, expressed or implied, is given, including those of merchantability, fitness for a particular purpose or any other matter with respect to the product.

8.0 MAINTENANCE

No maintenance is required.

9.0 TECHNICAL SERVICES

Technical services for all of our products may be obtained by contacting our corporate office

Corporate Office: (877) 535-0555

10.0 FILING SYSTEMS

Barrier-Bac brochures are available from Barrier-Bac distributors, sales representatives, Inteplast Group, and our web site:

www.BarrierBac.com



OFFICE: 9 Peach Tree Hill Rd., Livingston, NJ 07039 PLANT: 101 Inteplast Blvd., Lolita, TX 77971

TEL: 877-535-0555 FAX: 800-709-6002

E-MAIL: info@BarrierBac.com

WEBSITE: www.BarrierBac.com / www.inteplast.com



Double-Sided Termination Tape

DIVISION: 033000, 072600

1.0 PRODUCT NAME

Barrier-Bac Double-Sided Termination Tape

2.0 SUPPLIER

Inteplast Group 9 Peach Tree Hill Road Livingston, NJ 07039

Technical Assistance TEL: (877) 535-0555 FAX: (800) 709-6002 www.barrierbac.com

3.0 PRODUCT DESCRIPTION

Barrier-Bac Double-Sided Termination Tape (DSTT) is a 25 mil, Double-Sided adhesive tape made to bond Barrier-Bac vapor barrier membrane to concrete, masonry, gypsum board, metal, wood and other surfaces.

3.1 COMPOSITION

Barrier-Bac Double-Sided Termination Tape is a high performance, pressure sensitive tape, made from a blend of synthetic resins, thermoplastics and rubber.

3.1 SIZE & PACKAGING

Barrier-Bac Double-Sided Termination Tape is available in standard size of $2'' \times 50'$ per roll.

16 rolls of Barrier-Bac Double-Sided Termination Tape are packed in a case. There are 48 cases per pallet.

Barrier-Bac Double-Sided Termination Tape weighs approximately 1.5 pounds per roll.

4.0 TECHNICAL DATA

Physical Properties of Barrier-Bac Double-Sided Termination Tape

Property	Test Method	Result
Peel Adhesion To Steel	ASTM D-1000	12 lbs/inch width
Elongation	ASTM D 882	700%
Dimensions	_	50 feet long 2 inches wide
Low Temperature Flexibility	ASTM C 765	Passes ½" radius@-34 degrees C, (-30 degrees F)
Water Vapor Test / Permeance	ASTM E 96 B	0.0112 perms
Application Temperature	-	40 degrees to 150 degrees F ambient
Service Temperature	_	-40 degrees F to 212 degrees F
VOC Content	-	None, 100% solids
Color	_	Gray

5.0 INSTALLATION

- All surfaces must be clean and dry.
- Attach tape on clean surface of vertical concrete or surface where Barrier-Bac vapor barrier membrane is to be terminated: next, remove release paper from tape then attach edge of Barrier-Bac vapor barrier membrane. Once Barrier-Bac vapor barrier membrane is properly placed, evenly seal vapor barrier to vertical concrete or other surface at termination point.
- Barrier-Bac Double-Sided Termination Tape (DSTT) is easily cut with scissors or utility knife.



Double-Sided Termination Tape

DIVISION: 033000, 072600

6.0 AVAILABILITY & COST

Barrier-Bac Double-Sided Termination Tape is available nationally through our network of building supply companies. Please contact our corporate office for a distributor in your area. Pricing may be obtained by contacting your local Barrier-Bac Products distributor or sales representative.

7.0 WARRANTY

We warrant and guarantee our specifications as published. Published test results are based upon accepted industry practices as well as the test methods called for and listed on our test documents. We believe, to the best of our knowledge, that our published results are accurate, reliable and represent our Double-Sided seam tape. Inteplast Group Ltd. cannot control site conditions and improper installation practices. Therefore, no warranty, expressed or implied, is given, including those of merchantability, fitness for a particular purpose or any other matter with respect to the product.

8.0 MAINTENANCE

No maintenance is required.

9.0 TECHNICAL SERVICES

Technical services for all of our products may be obtained by contacting our corporate office

Corporate Office: (877) 535-0555

10.0 FILING SYSTEMS

Barrier-Bac brochures are available from Barrier-Bac distributors, sales representatives, Inteplast Group, and our web site: www.BarrierBac.com



OFFICE: 9 Peach Tree Hill Rd., Livingston, NJ 07039 PLANT: 101 Inteplast Blvd., Lolita, TX 77971

TEL: 1-877-535-0555

FAX: 1-800-709-6002

E-MAIL: info@BarrierBac.com

WEB SITE: www.BarrierBac.com





Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

Inteplast Group Corporation

World-Pak Division 101 Inteplast Boulevard

Lolita Texas 77971 USA

Holds Certificate No:

FM 35975

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Manufacture of Cross-laminated Polyolefin Film, Fluted Polyolefin Boards, and PVC Sheet at Lolita, Texas with Service to production units including Sales, Customer Service, and Purchasing at Livingston, NJ.

For and on behalf of BSI:

Carlos Pitanga, Chief Operating Officer Assurance - Americas

Original Registration Date: 1997-01-15 Latest Revision Date: 2018-08-06 Effective Date: 2015-11-02 Expiry Date: 2018-11-01

Page: 1 of 2







...making excellence a habit."

Certificate No: FM 35975

Location Registered Activities Inteplast Group Corporation Manufacture of Cross-laminated Polyolefin Film. World-Pak Division XF Film Plant 101 Inteplast Boulevard Lolita Texas 77971 USA Inteplast Group Corporation Manufacturer of Fluted Polyolefin Boards. World-Pak Division **Profiles Plant** 101 Inteplast Blvd. Lolita Texas 77971 USA

Inteplast Group Corporation World-Pak Division PVC Sheet Plant 101 Inteplast Blvd. Lolita Texas

Lolita Texas 77971 USA Manufacture of PVC Sheet.

Original Registration Date: 1997-01-15 Effective Date: 2015-11-02 Latest Revision Date: 2018-08-06 Expiry Date: 2018-11-01

Page: 2 of 2



November 5, 2018

Certificate of Origin

To Whom It May Concern:

This is to certify that the following products are manufactured in our ISO 9001:2015 certified plant located in 101 Inteplast Blvd., Lolita TX 77971, United States of America.

- 1) Barrier-Bac VB-250 (11 mil) Class A Vapor Retarder.
- 2) Barrier-Bac VB-350 (16 mil) Class A Vapor Retarder.
- 3) Barrier-Bac VBC-350 (31 mil) Composite Class A Vapor Retarder.

Sincerely Yours,

Frank Chen, General Manager

World-Pak XF Inteplast Group P: 877-535-0555 F: 800-709-6002



Successful Projects

From A to Z

Barrier-Bac is recognized as one of the best solutions to vapor moisture migration. It is widely used by architects and contractors across the country. This list is only a small sampling of many Barrier-Bac projects nationwide.

Florida

PROJECT NAME: University of Florida Drama & Art Complex, Gainesville, FL

ARCHITECT: Zeidler Grinnell Partnership, West Palm Beach, FL

STRUCTURAL ENGINEER: Walter P. Moore, Tampa, FL

CONTRACTOR: Eastern Construction, Inc.

PRODUCT: Barrier-Bac VB-250(11 mil) 216,000 square feet

PROJECT NAME: Orange County Correctional Facility, Orlando, FL

STRUCTURAL ENGINEER: BRPH, Architects & Engineers, Inc. Melbourne, FL

CONTRACTOR: Baker Concrete Inc., Orlando, FL

PRODUCT: Barrier-Bac VB-350(16 mil) 188,000 square feet

Georgia

PROJECT NAME: Rabun County Primary School, Tiger, GA STRUCTURAL ENGINEER: Southern A&E, Austell, GA

CONTRACTOR: Charles Black Construction Co., Cleveland, GA PRODUCT: Barrier-Bac VB-250(11 mil) 43,000 square feet

Illinois

PROJECT NAME: Glenview Retirement Home, Glenview, IL

ARCHITECT: Legat Architects

CONTRACTOR: Schwendener Builders, Inc.

PRODUCT: Barrier-Bac VB-250(11 mil) 168,000 square feet

PROJECT NAME: LINCOLN PARK COMMONS, CHICAGO, IL

ARCHITECT: PAPPA GEORGE/ HAYES ARCHITECTS CONTRACTOR: SCHWENDENER BUILDERS, INC.

PRODUCT: BARRIER-BAC VB-250(11 MIL) 172,000 SQUARE FEET

Kansas

PROJECT NAME: Brookridge Elementary School, Overland Park, KS STRUCTURAL ENGINEER: ACI/Frangkiser Hutchens, Leawood, KS

CONTRACTOR: Zimmer Construction, Overland Park, KS PRODUCT: Barrier-Bac VB-250(11 mil) 87,000 square feet

Kentucky

PROJECT NAME: Bluegrass Chemical Agent-Destruction Pilot Plant, Richmond, KY

CONTRACTOR: Bechtel National Inc., Frederick, MD

PRODUCT: Barrier-Bac VB-250(11 mil) 300,000 square feet



Successful Projects

From A to Z

Louisiana

PROJECT NAME: Rosepine High School, Rosepine, LA

STRUCTURAL ENGINEER: Charles Ladner & Associates, Lake Charles, LA

PRODUCT: Barrier-Bac VB-250(11 mil) 146,000 square feet

Mississippi

PROJECT NAME: North Mississippi Power Regional HQ, Olive Branch, MS

STRUCTURAL ENGINEER: Fisher & Arnold, Memphis, TN GENERAL CONTRACTOR: Linkous Construction, Memphis, TN CONCRETE CONTRACTOR: Brooks & Mazzola, Collierville, TN PRODUCT: Barrier-Bac VB-250(11 mil) 50,000 square feet

PROJECT NAME: Southern Beverage Distribution Facility, Hattiesburg, MS

ARCHITECT: Portman Architects, Atlanta, GA CONTRACTOR: N&W Construction Co., Inc.

PRODUCT: Barrier-Bac VB-250(11 mil) 232,000 square feet

New York

PROJECT NAME: Averill Park High School, Averill Park, NY

ARCHITECT: Rhinebeck Associates, Inc. CONTRACTOR: Depaolo & Sons, Inc.

PRODUCT: Barrier-Bac VB-250(11 mil) 152,000 square feet

PROJECT NAME: St. Luke's Hospital, New Harford, NY ARCHITECT: DeWolff Partners, Inc., Rochester, NY CONTRACTOR: Murnane, Inc., Whitesboro, NY

PRODUCT: Barrier-Bac VB-350(16 mil) 177,000 square feet

North Carolina

PROJECT NAME: Belk Store #412, Waynesville, NC

STRUCTURAL ENGINEER: Artech Design Group, Chattanooga, TN

CONTRACTOR: EMJ Corporation, Chattanooga, TN PRODUCT: Barrier-Bac VB-250(11 mil) 46,286 square feet

PROJECT NAME: Larchmont Apartment, Asheville, NC STRUCTURAL ENGINEER: Connelly Builders, Columbia, SC GENERAL CONTRACTOR: Connelly Builders, Columbia, SC CONCRETE CONTRACTOR: Ashmore Concrete, Columbia SC PRODUCT: Barrier-Bac VB-350(16 mil) 20,000 square feet

South Carolina

PROJECT NAME: Florence County Middle School, Florence, SC

STRUCTURAL ENGINEER: FW Architects, Florence, SC CONTRACTOR: Martin Engineering, White Rock, SC

PRODUCT: Barrier-Bac VB-350(16 mil) 120,000 square feet



Successful Projects

From A to Z

Tennessee

PROJECT NAME: American Essoteric Laboratories, Memphis, TN

STRUCTURAL ENGINEER: ETFC, Architects, TN

CONTRACTOR: Kajima Construction Service, Memphis, TN PRODUCT: Barrier-Bac VB-250(11 mil) 90,000 square feet

PROJECT NAME: FedEX Hangar 21, Memphis, TN

STRUCTURAL ENGINEER: Renaissance Architects, Lakeland, TN GENERAL CONTRACTOR: Linkous Construction, Memphis, TN CONCRETE CONTRACTOR: Brooks & Mazzola, Collierville, TN PRODUCT: Barrier-Bac VB-250(11 mil) 40,000 square feet

Texas

PROJECT NAME: T&L Distribution Center, Houston, TX STRUCTURAL ENGINEER: Bay Architects, Webster, TX

GENERAL CONTRACTOR: Angler Construction, Houston, TX

CONCRETE CONTRACTOR: Cima Concrete Construction L.P, South Houston, TX

PRODUCT: Barrier-Bac VB-350(16 mil) 121,000 square feet

PROJECT NAME: Houston Sports Arena, Houston, TX STRUCTURAL ENGINEER: Walter P Moore, Houston, TX

CONTRACTOR: Capform, Inc.

PRODUCT: Barrier-Bac VB-250(11 mil) 306,000 square feet

Virginia

PROJECT NAME: Kellam High School, Virginia Beach, VA

ARCHITECT: HBA Architecture & Interior Design, Virginia Beach, VA CONTRACTOR: S.B. Barllard Construction Co., Virginia Beach, VA

PRODUCT: Barrier-Bac VB-350(16 mil) 272,000 square feet

PROJECT NAME: James Monroe High School, Fredericksburg, VA

ARCHITECT: Moseley Architects Inc., Richmond, VA PRODUCT: Barrier-Bac VB-350(16 mil) 172,125 square feet

Washington

PROJECT NAME: University of Washington Student Housing, Seattle, VA

ARCHITECT: Mahlum Architects, Seattle, WA

CONTRACTOR: W.G. Clark Construction, Seattle WA PRODUCT: Barrier-Bac VB-350(16 mil) 30,000 square feet