SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: Inteplast Barrier-Bac VBC-350 (31 mil) Composite Vapor Barrier

Manufacturer: Inteplast Group Address: 9 Peach Tree Hill Rd. Livingston, NJ 07039 Phone: (877) 535-0555

Trade Name: Barrier-Bac (31 mil) Composite Vapor Barrier Model No.: VBC-350

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Date:

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

BARRIER-BAC

Superior Vapor Barrier Products

MADE IN USA

Striking the Right Balance for Optimum Performance

Version: Jan 1, 2024

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

Features & Benefits

- Manufacture 10mil, 15mil, and 31mil Composite Vapor Barriers
- Exceeds ASTM E 1745 Class A, B and C Specifications

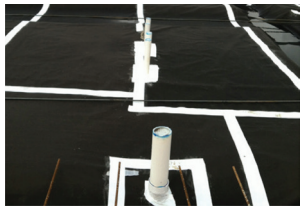
VBC-350

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

Our 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 & Methane.

White Bond Tape



Our 7-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

BARRIER-BAC

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Product Specifications

	Test Standards/ Methods	**VB-250** (10 mil)	**VB-350** (15 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	0.0204 (US Perms)	0.007 (US Perms)	0.007 (US Perms)
Tensile Strength	ASTM E 154 (ASTM D 882)	54.2 lbf/in	82.1 lbf/in	83.75 lbf/in
Puncture Resistance	ASTM D 1709	2480 grams	3350 grams	3960 grams

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.

INTEPLAST GROUP®

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

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

BARRIER-BAC
Superior Vapor Barrier Products

MADE IN USA

Technical Data

VBC-350 (31mil) Composite Vapor Retarder

DIVISION: 072600,033000

Version: January 1, 2024

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.

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 ft^2) 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.

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

Water Vapor Permeance	New Material ASTM E154 Sec.7 (Test Method E96)	0.007 (US Perms)
	After Conditioning ASTM E154 Sec. 8 (Test Method E96)	0.009 (US Perms)
	ASTM E154 Sec. 11 (Test Method E96)	0.025 (US Perms)
	ASTM E154 Sec. 12 (Test Method E96)	0.011 (US Perms)
	ASTM E154 Sec. 13 (Test Method E96)	0.013 (US Perms)
Max Peel Adhesion to Concrete	ASTM E 903	8 lbs / in
Tensile Strength	ASTM D 882	83.75 lbf/in
Puncture Resistance	ASTM D 1709	3960 grams
Coefficients of Friction	ASTM D 1894	0.6
Radon Diffusion Coefficient	K124/02/95	2.4 x 10^{-11} m^2/S
Methane permeance	ASTM D 1434	90.59 $cm^3/(m^2$. Atm .Day)
Elmendort Tear	ASTM D 1922	9,500 gram
Puncture-Propagation Tear	ASTM D 2582	20,000 gram

BARRIER-BAC
Superior Vapor Barrier Products

Technical Data

VBC-350 (31mil) Composite Vapor Retarder

DIVISION: 072600,033000

4.0 TECHNICAL DATA (Continued)

- ASTM E 1643 Standard Practice for installation of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs.
- 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 case project design specifications require or it is needed to use additional adhesive to secure Barrier-Bac White Bond Tape, we recommend using 3M™ 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

INTEPLAST GROUP®
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TEL: 877-535-0555
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E-MAIL: info@BarrierBac.com
WEBSITE: www.BarrierBac.com / www.inteplast.com

BARRIER-BAC
Superior Vapor Barrier Products

MADE IN USA

Technical Data

White Bond Tape

DIVISION: 033000, 072600

Version: Jan 1, 2024

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 30 degrees F to 160 degrees F and provides excellent bonding 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. This product is made in the USA.

3.1 SIZE & PACKAGING

Barrier-Bac White Bond Tape is available in standard size of 4' x 180' (96mm x 55M) per roll. Barrier-Bac White Bond Tape net weighs approximately 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 1000	25 lbs/in
Elongation	ASTM D 3759	85%
Water Vapor Permeance	ASTM D 1249	0.11 US Perms
Peel Adhesion to Steel	PSTC-101	125 oz/in
Application Temp	Degree F	30 F to 160 F
Operating Temp Range	Degree F	20 F to 200 F
Thickness	---	7 mils
Shelf Life	---	One year after shipment

BARRIER-BAC
Superior Vapor Barrier Products

Technical Data

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.

—In case project design specifications require or it is needed to use additional adhesive to enhance Barrier-Bac White Bond Tape, we recommend using 3M™ Scotch-Weld™ Hold-Fast 70 Cylinder Spray Adhesive Clear to apply on the vapor barrier surface prior to tape application.

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 accurate, 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

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Inteplast Corporate Office:
(877) 535-0555

10.0 FILING SYSTEMS

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E-MAIL: info@BarrierBac.com
WEBSITE: www.BarrierBac.com / www.inteplast.com

INTEPLAST GROUP®
World-Pak

June 12, 2023

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 (10 mil) Class A Vapor Retarder.
2) Barrier-Bac VB-350 (15 mil) Class A Vapor Retarder.
3) Barrier-Bac VBC-350 (31 mil) Composite Class A Vapor Retarder.
4) Barrier-Bac VBC-90 (18 mil) Floor Protection.

Sincerely Yours,

Frank Chen, General Manager
World-Pak XF
Inteplast Group
P: 877-535-0555
F: 800-709-6002

bsi.

By Royal Charter

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
Effective Date: 2015-11-02
Latest Revision Date: 2018-08-06
Expiry Date: 2018-11-01

...making excellence a habit.™

Certificate No: **FM 35975**

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

Original Registration Date: 1997-01-15
Latest Revision Date: 2018-08-06

Effective Date: 2015-11-02
Expiry Date: 2018-11-01