# ICC-ES Evaluation Report

**ESR-1602**

*Reissued February 2024*

*Revised September 2024*

*Subject to renewal February 2026*

*This report also contains:*

**- CBC Supplement**

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| **DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**<br>**Section: 07 25 00—Water-Resistive Barriers/Weather Barriers**<br>**Section: 07 27 00—Air Barriers** | **REPORT HOLDER: ALPHA PROTECH ENGINEERED PRODUCTS, INC.**<br>**ADDITIONAL LISTEES: NORANDEX** | **EVALUATION SUBJECT: REX™ WRAP PLUS AND REX™ WRAP WATER-RESISTIVE BARRIERS AND AIR BARRIERS** | |

## 1.0 EVALUATION SCOPE

### 1.1 Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 *International Energy Conservation Code*® (IECC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

**Properties evaluated:**

- Water resistance
- Air Leakage

### 1.2 Evaluation to the following green code(s) and/or standards:

- 2022 *California Green Building Standards Code (CALGreen)*, Title 24, Part 11
- 2024, 2021, 2018, 2015 and 2012 *International Green Construction Code*® (IgCC)
- 2023, 2020, 2017, 2014 and 2011 ANSI/ASHRAE/USGBC/IES Standard 189.1–Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard™* (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

**Attributes verified:**

- See Section 2.0

## 2.0 USES

Rex™ Wrap Plus and Rex™ Wrap are used as water-resistive barriers on the exterior side of exterior walls of buildings of Type V-B construction and non-fire-resistance-rated construction permitted under the IRC. Rex™ Wrap Plus and Rex™ Wrap are alternatives to the water-resistive barriers specified in the 2024, 2021 and 2018

IBC Section 1403.2 (2015, 2012, 2009 and 2006 IBC Section 1404.2) and IRC Section R703.2. The products are considered equivalent to 60-minute Grade D paper as described in 2024, 2021, 2012, 2009 and 2006 IBC Section 2510.6 and 2024, 2021, 2018 and 2015 IRC Section R703.7.3 (2012, 2009 and 2006 IRC Section R703.6.3). The products are also classified as ASTM E2556 Type II water-resistive barriers as specified in 2024, 2021, 2018 and 2015 IBC Section 2510.6 and 2024, 2021, 2018 and 2015 IRC Section R703.7.3. The products may also be used as air barrier materials under 2024 IRC Section N1102.5.1 (2021, 2018, 2015, 2012, 2009 and 2006 IRC Section N1102.4.1) and Sections C402.6 and R402.5 of the 2024 IECC (Sections C402.5 and R402.4 of the 2021, 2018 and 2015 IECC; Sections C402.4 and R402.4 of the 2012 IECC and Sections 402.4 and 502.4 of the 2009 and 2006 IECC).

The attributes of the Rex™ Wrap Plus and Rex™ Wrap water-resistive barriers have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1 for water-resistive barriers and for air barriers; (ii) 2024 and 2021 IgCC Section 701.3.1.2, 2018 IgCC Section 701.3.1.1 and 2015 and 2012 IgCC Section 605.1.2.1 for air barriers; (iii) 2023 and 2020 ASHRAE 189.1 Section 7.3.1.2, 2017 and 2014 ASHRAE 189.1 Section 7.3.1.1 and 2011 ASHRAE 189.1 Section 7.4.2.9 for air barriers; (iv) ICC 700-2020 Sections 602.1.8, 11.602.1.8, 1202.6 and 13.104.1.4; (v) ICC 700-2015 Section 602.1.8, 11.602.1.8 and 12.6.602.1.8 (vi) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (vii) ICC 700-2008 Section 602.9 for water-resistive barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

## 3.0 DESCRIPTION

### 3.1 Rex™ Wrap Plus:

Rex™ Wrap Plus consists of a perforated, microporous, woven polyolefin fabric, with an additional polyolefin coating. The sheets have an average weight of 14.52 pounds per 1000 square feet (0.071 kg/m$^2$) and are produced in rolls of varying size.

### 3.2 Rex™ Wrap:

Rex™ Wrap is similar to Rex™ Wrap Plus, except that Rex™ Wrap has an average weight of 13.47 pounds per 1000 square feet (0.066 kg/m$^2$).

### 3.3 Air Barriers

The products described in this report have an air leakage rate not exceeding 0.02 L/s·m$^2$ at 75 Pa [0.004 cfm/ft$^2$ at 0.3 w.g. (1.57 psf)] when used as an air barrier material under 2024 IRC Section N1102.5.1 (2021, 2018, 2015, 2012, 2009 and 2006 IRC Section N1102.4.1) and 2024 IECC Sections C402.6 and R402.5 (Sections C402.5 or R402.4 of the 2021, 2018 and 2015 IECC; Sections C402.4 or R402.4 of the 2012 IECC and Sections 402.4 or 502.4 of the 2009 and 2006 IECC).

## 4.0 INSTALLATION

When installed as a water-resistive barrier or an air barrier, the manufacturer's published installation instructions and this report must be strictly adhered to. If requested by the code official, a copy of this report must be available at the jobsite during installation. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

Rex™ Wrap Plus and Rex™ Wrap are installed after wall framing is completed and before windows and doors are installed. The roll is placed a minimum of 12 inches (305 mm) from the starting corner and fastened to the sheathing with corrosion-resistant nails having minimum 1-inch-diameter (25.4 mm) plastic washer heads or cap heads, spaced at a maximum of 32 inches (812 mm) on center, or corrosion-resistant staples with minimum 1-inch (25.4 mm) crowns, spaced a maximum of 32 inches (812 mm) on center; and is then unrolled around the building and fastened with nails spaced at a maximum of 32 inches (812 mm) on center or staples spaced a maximum of 32 inches (812 mm) on center. The printed side of the wrap is installed facing the outside. A minimum of 6 inches (152 mm) of overlap must be provided for vertical seams and 2 inches (51 mm) for horizontal seams, except where the manufacturer's installation instructions specify a greater overlap. When used over wood-based sheathing in exterior plaster applications, the product must be applied over the sheathing in accordance with 2018, 2015, 2012, 2009 and 2006 IBC Section 2510.6 or IRC Section R703.6.3

under the 2012, 2009 and 2006 IRC and Section R703.7.3 under the 2018 and 2015 IRC, using two layers of the product or using one layer together with an intervening layer.

When used over wood based sheathing in exterior plaster applications in accordance with 2024 and 2021 IBC Section 2510.6 and 2024 and 2021 IRC Section R703.7.3 installations must be as follows:

- For dry climate zones (B) in accordance with 2024 and 2021 IBC Section 2510.6.1 or 2024 and 2021 IRC Section R703.7.3.1, the product must be applied in accordance with 2024 and 2021 IBC Section 2510.6.1 Item 1 or 2 or 2024 and 2021 IRC Section R703.7.3.1 Item 1 or 2, as applicable.
- For moist climate zones (A) or marine climate zones (C) in accordance with 2024 and 2021 IBC Section 2510.6.2 or 2024 and 2021 IRC Section R703.7.3.2, the product must be applied in accordance the dry climate zone (B) provisions noted above and with the additional requirements noted in 2024 and 2021 IBC Section 2510.6.2 Item 1 or 2024 and 2021 IRC Section R703.7.3.2 Item 1, as applicable.

For cementitious coatings or exterior insulation and finish systems, application must be in accordance with the evaluation report on the exterior coating.

## 5.0 CONDITIONS OF USE:

The Rex™ Wrap Plus and Rex™ Wrap water-resistive barriers described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** The manufacturer's published installation instructions and this report must be strictly adhered to. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

**5.2** The membrane must be covered in accordance with the manufacturer's installation instructions with an approved exterior wall covering complying with the applicable code.

**5.3** This report is based on air leakage rates for the products as an air barrier material only. The design and evaluation of the air barrier assembly, of which the products are a component, is outside the scope of this report.

**5.4** The product is manufactured under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated August 2016 (Editorially revised June 2024).

## 7.0 IDENTIFICATION

**7.1** The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-1602) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

**7.2** In addition, the Rex™ Wrap Plus and Rex™ Wrap products are identified by a label on the container bearing the report holder's name (Alpha ProTech Engineered Products, Inc.), the product name (Rex™ Wrap Plus or Rex™ Wrap), and the evaluation report number (ESR-1602). The product name (Rex™ Wrap Plus or Rex™ Wrap), and the evaluation report number (ESR-1602) are printed, at regular intervals, on the outside face of the products.

Alternatively, each roll of the product described in this report is marked by a label on the container bearing the additional listee's brand name (NORANDEX), the product name (see Table 1 of this report), the date of manufacture, and the evaluation report number (ESR-1602). The product name (see Table 1 of this report), and the evaluation report number (ESR-1602) are printed, at regular intervals, on the outside face of the products.

**7.3** The report holder's contact information is the following:

**ALPHA PROTECH ENGINEERED PRODUCTS, INC.**
**301 SOUTH BLANCHARD STREET**
**VALDOSTA, GEORGIA 31601**
**(229) 242-1931**
**www.alphaprotech.com**

**7.4** The Additional Listees' contact information is the following:

**NORANDEX**
**1 ABC PARKWAY**
**BELOIT, WISCONSIN 53511**
**(800) 528-0942**
**www.norandex.com**

**TABLE 1—COMPANY NAME, BRAND NAME AND PRODUCT NAME CORRELATION**

| | | |
|---|---|---|
| **COMPANY** | Alpha Protech Engineered Building Products | NORANDEX |
| **BRAND NAME** | REX™ | NORANDEX |
| **PRODUCT NAME** | REX™ Wrap Plus | NORANDEX PLUS |
| | REX™ Wrap | NORANDEX WRAP |

**DIVISION 07 00 00—THERMAL AND MOISTURE PROTECTION**
**Section: 07 25 00—Water-Resistive Barriers/Weather Barriers**
**Section: 07 27 00—Air Barriers**

**REPORT HOLDER:**

**ALPHA PROTECH ENGINEERED PRODUCTS, INC.**

**EVALUATION SUBJECT:**

**REX™ WRAP PLUS AND REX™ WRAP WATER-RESISTIVE BARRIERS AND AIR BARRIERS**

## 1.0 REPORT PURPOSE AND SCOPE

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Rex™ Wrap Plus and Rex™ Wrap Water-resistive Barriers and Air Barriers, evaluated in ICC-ES evaluation report ESR-1602, have also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2022 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 *California Residential Code* (CRC)
- 2022 *California Energy Code* (CEC)

## 2.0 CONCLUSIONS

### 2.1 CBC:

The Rex™ Wrap Plus and Rex™ Wrap Water-resistive Barriers and Air Barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1602, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the applicable provisions of the CBC. Use as an air barrier must be in accordance with the CEC.

### 2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

### 2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

### 2.2 CRC:

The Rex™ Wrap Plus and Rex™ Wrap Water-resistive Barriers and Air Barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1602, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the applicable provisions of the CRC. Use as an air barrier must be in accordance with the CEC.

This supplement expires concurrently with the evaluation report, reissued February 2024 and revised September 2024.

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