



LISTING INFORMATION OF
**AMBIT - AMBI-SEAL 5.0 Spray-applied Polyurethane Foam
Plastic Insulation**
SPEC ID: 58396

Ambit Polyurethanes, LLC
2925 Galleria Drive
Arlington, TX 76011
United States

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

LISTING INFORMATION

Product Description

AMBI-SEAL 5.0 is a low-density, two-component spray-applied polyurethane foam insulation. The insulation is produced in the field by combining a polymeric isocyanate (A component) with a resin (B component). The chemical proportioner uses positive displacement pumps and dispenses the chemical components in a fixed 1:1 ratio.

FLAME SPREAD RATINGS

Test Standard	Flame Spread	Smoke Development
ASTM E84	25 or less	450 or less

FIRE RATINGS

Test Standard	Rating	Design Number
NFPA 285	Met requirements	APL/FI 30-01

CODE COMPLIANCE RESEARCH REPORT

Evaluation Method	Building Code	CCRR Number
ICC-ES AC377	2021, 2018 and 2015 IBC 2021, 2018 and 2015 IRC 2021, 2018 and 2015 IECC 2023, 2020 FBC	CCRR-0393

Attribute	Value
Code Reports	Yes
Criteria	NFPA 285 (2019)
Criteria	ASTM E84 (2020)
Criteria	ICC-ES AC377 (February 2020)
Criteria	ICC 1100 (2019)
CSI Code	07 21 00 Thermal Insulation
CSI Code	07 21 19 Foamed-In-Place Insulation
Listing Section	BUILDING MATERIALS WITH SURFACE BURNING CHARACTERISTICS
Spec ID	58396

DRAWING INDEX

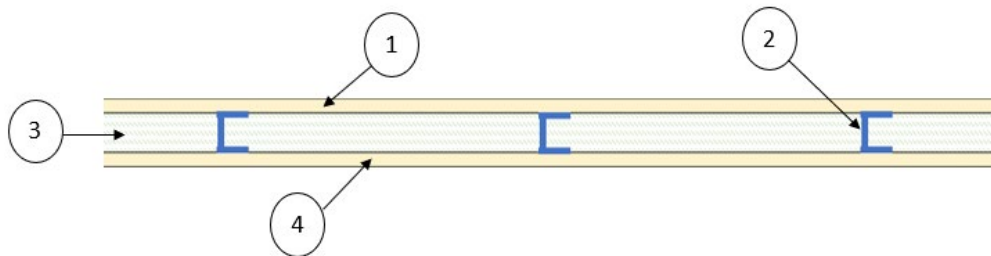
APL/FI 30-01

APL/FI 30-01



Division 07 00 00 Thermal and Moisture Protection
 07 21 00 Thermal Insulation
 07 21 19 Foamed-In-Place Insulation

AMBIT Polyurethane, LLC
Design No. APL/FI 30-01
Spray-Applied Polyurethane Foam
AMBI-SEAL 5.0 SPF Insulation
NFPA 285
Rating: Meets Requirements



- 1. GYPSUM BOARD:** Install min. 5/8 in. nominal thickness Type X gypsum board oriented with long dimension perpendicular to vertical framing and offset vertical joints. Attach to framing using #6 x 1-1/4 in. long bugle-head screws spaced vertically 12 in. on center (oc) and 3/8 in. to 5/8 in. from edges of boards.
- 2. FRAMING:** Install max. 6 in. deep and min. 3-5/8 in. deep, min. 20 GA galvanized steel studs and track, with studs spaced max. 24 in. oc. Secure steel studs horizontally to top and bottom tracks using #2 - 8 x 1/2 in. self-drilling zinc-plated screws. In the stud cavity at the floor line, apply a min. 4 in. thick, 4 pcf mineral wool as fire stopping material.
- 3. SPRAY-APPLIED POLYURETHANE FOAM:**

CERTIFIED PRODUCT: AMBIT Polyurethane, LLC
 AMBI-SEAL 5.0

 Spray-apply the AMBI-SEAL 5.0 insulation to partially fill or to fully fill the steel stud cavity.
- 4. EXTERIOR SHEATHING:** Install ASTM C1177 compliant, min. 5/8 in. nominal thickness, Type X Glass Mat Gypsum Sheathing oriented with long dimension perpendicular to vertical framing and offset vertical joints. Attach to framing using #6 x 1-1/4 in. long bugle-head screws spaced vertically 12 in. oc and 3/8 in. to 5/8 in. from edges of boards.
- 5. EXTERIOR CLADDING (Optional, Not Shown):** Apply any of the following non-combustible claddings to the exterior:
 - A. **BRICK AND BRICK TIES/ANCHORS** – Install nominal 4 in. thick clay brick or veneer with max. 2 in. air gap, with brick ties/anchors spaced max. 16 in oc vertically and max. 24 in. oc horizontally (aligned with framing).
 - B. **STUCCO** – Install min. 3/4 in. thick exterior cement plaster and lath.
 - C. **NATURAL STONE (GRANITE, LIMESTONE, MARBLE, SANDSTONE)** – Install min. 2 in. thick natural stone using an approved installation technique with a max. 2 in. air gap.

Date Revised: January 3, 2023

Page 1 of 2

Spec ID 58396

Version: 02 August 2017

SFT-BC-OP-191

APL/FI 30-01 (2 OF 2)

Division 07 – Thermal and Moisture Protection
 07 21 00 Thermal Insulation
 07 21 19 Foamed-In-Place Insulation

- D. ARTIFICIAL CAST STONE – Install min. 1-1/2 in. thick artificial cast stone using an approved installation technique with a max. 2 in. air gap.
- E. TERRA COTTA – Install min. 1-1/4 in. thick terra cotta cladding using an approved installation technique with a max. 2 in. air gap.
- F. CONCRETE – Install min. 2 in. thick concrete with a max. 2 in. air gap.
- G. GLASS FIBER-REINFORCED CONCRETE PANELS – Install min. 1/4 in. thick panels per manufacturer's instructions.
- H. CMU BLOCKS – Install min. 4 in. thick blocks with max. 2 in. air gap.
- I. SHEET METAL – Install sheet metal cladding including steel, aluminum, copper, or zinc.

- 6. WATER-RESISTANT BARRIER (Optional, Not Shown):** Install a WRB under ASTM E136 compliant, non-combustible, min. 2 in. thick, min. 4 pcf mineral wool, with any of the approved exterior claddings.

Alternatively, install a WRB that complies with the following performance and installation requirements:

- ASTM E1354 Performance:
Peak heat release rate less than 150 kW/m², and effective heat of combustion less than 18 MJ/kg when tested in the horizontal orientation at an incident radiant heat flux of 50 kW/m²
- ASTM E84 or UL 723 Performance:
Flame Spread Index not to exceed 25, and Smoke Developed Index not to exceed 450
- When used in combination with stucco, use min. 7/8 in. thick exterior cement plaster and lath
- When used in combination with sheet metal, use min. 0.0149 in. thick steel only.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

Issue Date: 11-06-2020
Revision Date: 07-03-2024
Renewal Date: 11-30-2024

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 21 00 – Thermal Insulation
Section: 07 21 19 – Foamed-In-Place Insulation

REPORT HOLDER:
AMBIT Polyurethane, LLC
2925 Galleria Drive
Arlington, Texas 76011
(817) 677-1200
www.ambitpu.com

REPORT SUBJECT:
AMBI-SEAL 5.0 Spray-applied Polyurethane Foam Plastic Insulation

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021, 2018, and 2015 *International Building Code*® (IBC)
- 2021, 2018, and 2015 *International Residential Code*® (IRC)
- 2021, 2018, and 2015 *International Energy Conservation Code*® (IECC)
- 2023 and 2020 *Florida Building Code* – see Section 9.0

NOTE: This report references the most recent version of the Codes cited. Section numbers for earlier Code editions may differ.

1.2 The insulations have been evaluated for the following properties (see Table 1):

- Physical properties
- Surface-burning characteristics
- Thermal resistance
- Air permeance
- Water vapor transmission

1.3 The insulations have been evaluated for the following uses (see Table 1):

- Use as a nonstructural thermal insulating material on or in interior and exterior walls, floors, ceilings, and the underside of roofs
- Alternative to Code-prescribed thermal barriers
- Alternative to Code-prescribed ignition barriers
- Use in Type I, II, III, and IV under the IBC
- Use in Type V construction under the IBC and buildings regulated under the IRC
- Use an air-impermeable insulation
- Use as a vapor retarder

2.0 STATEMENT OF COMPLIANCE

The spray-applied polyurethane insulation products described in this report comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

3.0 DESCRIPTION

3.1 AMBI-SEAL 5.0: AMBI-SEAL 5.0 is a low-density, two-component, open cell, spray-applied polyurethane foam plastic insulation. The insulation is produced in the field by combining a polymeric isocyanate (A component) with a resin (B component). The insulation liquid components are supplied in 55-gallon drums and disposable 265-gallon totes. The liquid components must be stored at temperatures between 50°F and 110°F. The resin (B component) must be protected from freezing temperatures. The A and B components have a shelf life of twelve months when stored in factory-sealed containers at these temperatures.

3.2 DC315 Intumescent Coating: DC315 intumescent coating, manufactured by International Fireproof Technology, Inc., is a water-based coating supplied in 5-gallon pails and 55-gallon drums. The coating material has a shelf life of 24 months when stored in factory-sealed containers at a temperature between 41°F and 95°F. DC315 complies with ICC-ES AC456 and is recognized in ICC-ES ESR-3702.



3.3 FS-IB™: FS-IB™ is a one-part water-based intumescent coating manufactured by Flame Seal Products, Inc. The coating is supplied in 5-gallon pails and 55-gallon drums, and has a shelf life of 6 months when stored in unopened containers between 40°F and 80°F.

3.4 No-Burn® Plus ThB Intumescent Coating: No-Burn® Plus ThB intumescent coating is a one-part water-based coating supplied in 5-gallon pails and 55-gallon drums. The coating has a shelf life of 12 months when stored unopened at temperatures between 40°F and 90°F. No-Burn® Plus ThB complies with ICC-ES AC456 as recognized in IAPMO UES ER-0305.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Surface-burning Characteristics: The insulation, at a thickness of 4 inches, has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84. Based on large scale tests in accordance with NFPA 286 and ICC-ES AC377 Appendix X, the insulation can be installed at greater thicknesses as described in Sections 5.3 and 5.4. When the insulation is separated from the interior occupied space of the building with minimum 1/2-inch-thick gypsum board, the maximum insulation thickness is not limited. Under the IRC, a thermal barrier of minimum 23/32-inch-thick wood structural panel is also permitted, and the maximum insulation thickness is not limited.

4.2 Thermal Resistance: The thermal resistance of the AMBI-SEAL 5.0 insulation is shown in Table 2.

4.3 Air Permeability: The insulation, at a minimum thickness of 3 inches, is considered air-impermeable insulation in accordance with IBC Section 1202.3 or IRC Sections R202 and R806.5 and is considered an air barrier material complying with IECC Section C402.5.1.3, based on testing in accordance with ASTM E2178.

4.4 Water Vapor Permeability: The insulation, at a minimum thickness of 2.5 inches, is a Class III vapor retarder in accordance with IBC Section 202 and IRC Section R202, based on testing in accordance with ASTM E96 (desiccant method), and may be used where a Class III vapor retarder is required under IBC Section 1404.3 or IRC R702.7.

5.0 INSTALLATION

5.1 General: The insulation must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Application: The insulation is spray-applied on the jobsite using a volumetric positive displacement pump as identified in the AMBIT application instructions. The insulation must be applied when the ambient temperature is greater than 20°F. The insulation must not be used in areas that have a maximum in-service temperature of greater than 180°F. The insulation must not be used in electrical outlet or junction boxes or in contact with water, rain, or soil. The insulation must not be sprayed onto a substrate that is wet or covered with frost or ice, loose scales, rust, oil, or grease. The insulation must be protected from the weather during and after application. The insulation is applied in passes a minimum of 1/2 inch thick and a maximum of 8 inches thick.

5.3 Thermal Barrier:

5.3.1 Application with a Prescriptive Thermal Barrier: The insulation must be separated from the interior living space of the building by an approved thermal barrier of 1/2 inch thick gypsum board, or an equivalent 15-minute thermal barrier complying with and installed in accordance with IBC Section 2603.4 or IRC Section R316.4, as applicable. The prescriptive thermal barrier is not required when the insulation is used in sill plates and headers or in perimeter joint spaces at no more than 3-1/4 inches thickness as permitted in IRC Section R316.5.11. Additional exceptions are provided in Sections 5.3.2 and 5.4.

When the insulation is separated from the interior living space of the building with minimum 1/2-inch-thick gypsum board, the maximum thickness is not limited. Under the IRC, a thermal barrier of 23/32-inch-thick wood structural panel is also permitted, and the maximum insulation thickness is unlimited.



**5.3.2 Application without a Prescriptive Thermal Barrier:**

The insulation may be installed without the 15-minute thermal barrier prescribed in IBC Section 2603.4 and IRC Section R316.4, when installed as described in this section. The insulation must be covered on all exposed surfaces with intumescent coating as described in this section and in Table 3A.

The coating must be applied over the insulation in accordance with the coating manufacturer's instructions and this report. Surfaces to be coated must be dry, clean, and free of dirt, loose debris, and other substances that could interfere with adhesion of the coating. The coating is applied with low-pressure airless spray equipment.

5.4 Attics and Crawl Spaces: The insulation may be applied in attics and crawl spaces as described in 5.4.1, 5.4.2, or 5.4.3. When the insulation is installed in an attic or crawlspace in accordance with this section, a thermal barrier is not required between the insulation and the attic or crawl space but is required between the insulation and the interior living space. Attics and crawl spaces must be ventilated in accordance with the applicable Code.

5.4.1 Application with a Prescriptive Ignition Barrier:

When the insulation is installed within attics and crawl spaces where entry is made only for service of utilities, the ignition barrier must be installed in accordance with IBC Section 2603.4.1.6, or IRC Section R316.5.3 or R316.5.4, as applicable. The ignition barrier must be consistent with the requirements for the type of construction required by the applicable Code and must be installed such that the foam plastic insulation is not exposed.

5.4.2 Application without a Prescriptive Ignition Barrier:

The insulation may be installed in attics and crawl spaces without the ignition barrier prescribed in IBC Section 2603.4.1.6 and IRC Sections R316.5.3 and R316.5.4, subject to the following conditions:

- Entry to the attic or crawl space is only to service utilities, and no storage is permitted.
- There are no interconnected attic or crawl space areas.
- Air in the attic or crawl space is not circulated to other parts of the building.
- Under-floor (crawl space) ventilation is provided when required by IBC Section 1202.4 or IRC Section R408.1, as applicable.

- Attic ventilation is provided when required by IBC Section 1202.2.1 or IRC Section R806, except when air-impermeable insulation is permitted in unvented attics in accordance with IBC Section 1202.3 or IRC Section R806.5.
- Combustion air is provided in accordance with IMC (International Mechanical Code) Section 701.

The insulation may be spray-applied to the underside of the roof sheathing and/or rafters in attics; the underside of wood floors in crawl spaces; and to vertical surfaces in both attics and crawl spaces, as described in this section and in Table 3B.

The coatings are applied with low-pressure airless spray equipment in accordance with the coating manufacturer's instructions and this report. Surfaces to be coated must be dry, clean, and free of dirt, loose debris, and other substances that could interfere with the adhesion of the coating.

5.4.2.1 Use on Attic Floors: The insulation may be applied between and over the joists in attic floors to a maximum thickness in accordance with Table 3B and must be covered with intumescent coating as described in Section 5.4.2. The insulation must be separated from the interior occupied space by an approved thermal barrier.

Exception: If installed in the attic floor only, the ignition barrier required in IBC 2604.4 and IRC R316.5.2 may be omitted and the insulation may be fully exposed with no covering at a maximum thickness of 14 inches, based on testing in accordance with ASTM E970. The insulation must be separated from the interior occupied space of the building by an approved thermal barrier.

5.4.3 Unvented Attics: AMBIT has conducted end use configuration testing (per IBC Section 2603.9 and IRC Section R316.6) and analysis to qualify the use of AMBI-SEAL 5.0 insulation without a prescriptive ignition barrier, or intumescent coating, in unvented attics conforming with IBC Section 1202.3 or IRC Section R806.5. The testing and analysis are described in Intertek Report 104349713SAT-010, dated October 30, 2020. The conclusions of that evaluation are as follows: When the insulation is applied in unvented attics conforming to IBC Section 1202.3 or IRC Section R806.5, the insulation may be applied to the underside of roof sheathing and/or rafters, and to vertical





surfaces to a minimum thickness of 3-1/2 inches and a maximum thickness of 16 inches. The insulation may be left exposed to the attic without a prescriptive ignition barrier or an intumescent coating. The attic must have attic access complying with IRC Section R807, horizontally placed in the attic floor and opening outward toward the living space. For items penetrating the roof deck or walls, such as skylight wells or vents, the annular space must be covered with a minimum of 3 inches of insulation.

5.5 Exterior Walls in Types I, II, III, and IV Construction:

The AMBI-SEAL 5.0 insulation may be used in exterior walls of Types I, II, III, or IV construction complying with IBC Section 2603.5, when the assembly is as described in [Design Listing APL/FI 30-01](#). The potential heat of the insulation is 3,858 Btu/ft² based on a maximum 6-inch thickness.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The insulation must be separated from the interior occupied space of the building by a thermal barrier as described in Section 5.3, except as described in Section 5.3.2 and 5.4.

6.3 The insulation must not exceed the thicknesses noted in Sections 4.1, 5.3, and 5.4, as applicable.

6.4 When AMBI-SEAL 5.0 insulation is installed under the conditions of Section 5.4.3 of this report, the following conditions apply:

6.4.1 Since the performance of the insulation, when installed in unvented attics without a Code-prescribed ignition barrier or an intumescent coating, is based on fire performance of an unvented attic, the installation must be approved by the Code official. The installation must conform with the provisions of Section 5.4.3, and Conditions a. through c. and Condition f of Section 5.4.2. A copy of the Intertek report (referenced in Section 7.0) must be provided to the Code official upon request.

6.4.2 Signage shall be permanently affixed in the attic and shall be visible from all points within the attic. The sign shall state "Caution, this is an unvented attic by design. No modification may be made to this unvented condition. The attic shall not be vented. Holes into the unvented attic shall be immediately repaired and sealed. Penetrations of the ceiling or wall membrane between the unvented attic and living space, other than the horizontal access hatch, must be protected in an approved manner. This unvented attic shall not be used for storage. See Intertek Code Compliance Research Report CCRR-0393 on the Intertek Website."

6.5 Use of the insulation in areas where the probability of termite infestation is "very heavy" must be in accordance with IRC Section R318.4 or IBC Section 2603.8, as applicable.

6.6 Walls must include a vapor barrier complying with the Code.

6.7 Jobsite certification and labeling of the insulation must comply with IRC Section N1101.10, N1101.14, and IECC Sections C303.1 or R303.1 and R401.3, as applicable.

6.8 The insulation is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E84, ASTM E96, ASTM E2178, NFPA 259, NFPA 286, and NFPA 285.

7.2 Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377), dated February 2020, including reports of tests in accordance with Appendix X.

7.3 Data in accordance with ICC 1100 (2019).

7.4 Research Reports for evaluation of data in accordance with ICC-ES Acceptance Criteria for Fire-protective Coatings Applied to Spray-applied Foam Plastic Insulation Installed without a Code-prescribed Thermal Barrier (AC456), dated October 2015.





7.5 Intertek Product Evaluation Report No. 104349713SAT-010, October 30, 2020, "Application to Unvented Attic for Inclusion in an Intertek Code Compliance Research Report."

7.6 Intertek Listing Report "AMBIT - AMBI-SEAL 5.0 Spray-applied Polyurethane Foam Plastic Insulation", on the [Intertek Directory of Building Products](#).

8.0 IDENTIFICATION

The A and B components of the insulations described in this Research Report are identified with the manufacturer's name (AMBIT Polyurethane, LLC), address and telephone number; the product name; use instructions; the flame-spread and smoke-developed indices; the lot number; the Intertek Mark as shown below; and the Code Compliance Research Report number (CCRR-0393).



9.0 FLORIDA BUILDING CODE:

9.1 AMBI-SEAL 5.0, described in Sections 2.0 through 6.0 of this Research Report, complies with the 2023 and 2020 *Florida Building Code – Building*, *Florida Building Code – Residential* and *Florida Building Code – Energy Conservation*, including High-Velocity Hurricane Zones, subject to the following condition:

- Installation is as described in Sections 5.0 and 6.0 of this Research Report.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

This Code Compliance Research Report ("Report") is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Report. Only the Client is authorized to permit copying or distribution of this Report and then only in its entirety, and the Client shall not use the Report in a misleading manner. Client further agrees and understands that reliance upon the Report is limited to the representations made therein. The Report is not an endorsement or recommendation for use of the subject and/or product described herein. This Report is not the Intertek Listing Report covering the subject product and utilized for Intertek Certification and this Report does not represent authorization for the use of any Intertek certification marks. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.





TABLE 1A - PROPERTIES EVALUATED

PROPERTY	2021 IBC SECTION ¹	2021 IRC SECTION ¹	2021 IECC SECTION ¹
Physical properties	2603.1.1	Not required	Not required
Surface-burning characteristics	2603.3	R316.3	Not applicable
Thermal barrier/ignition barrier	2603.4	R316.4	Not applicable
Air permeability	1202.3	R806.5 N1101.10.5	C402.5.1.3 R303.1.5
Thermal resistance	See IECC	N1101.10.1 N1102	C303.1 R303.1
Vapor permeability	202, 1404.3	R202, R702.7	Not applicable
Exterior walls of Type I-IV construction	2603.5	Not applicable	Not applicable

¹ Section numbers may be different for earlier versions of the International Codes

TABLE 1B – PROPERTIES EVALUATED

PROPERTY	2023 FBC – BUILDING SECTION	2023 FBC - RESIDENTIAL SECTION	2023 FBC – ENERGY CONSERVATION SECTION
Physical properties	2603.1.1	Not required	Not required
Surface-burning characteristics	2603.3	R316.3	Not applicable
Thermal barrier/ignition barrier	2603.4	R316.4	Not applicable
Air permeability	1203.3	R806.5	C402.5.1.2.1
Thermal resistance	See FBC – Energy Conservation	See FBC – Energy Conservation	C303.1 R303.1.1
Vapor permeability	202, 1405.3	R202, R702.7.1	Not applicable
Exterior walls of Type I-IV construction	2603.5	Not applicable	Not applicable



TABLE 2 – THERMAL RESISTANCE – AMBI-SEAL 5.0

THICKNESS (in.)	R-VALUE (°F.ft ² .h/Btu) ^{1, 2, 3}
1	4.1
3.5	13
5.5	20
8.5	32
14	52
16	60

¹R-values are calculated based on tested K values at 1 inch and 3.5 inches nominal thickness at a nominal installed density of 0.57 pcf

²R-values between 1 inch and 3.5 inches may be interpolated; R-values greater than 3.5 inches are calculated using R=3.72 / inch

³R-values greater than 10 are rounded to the nearest whole number





TABLE 3A – USE OF INSULATION WITHOUT A PRESCRIPTIVE THERMAL BARRIER

MAXIMUM THICKNESS FOR CEILING (inches)	MAXIMUM THICKNESS FOR VERTICAL WALLS (inches)	INTUMESCENT COATING MINIMUM THICKNESS AND TYPE (Applied to all Exposed Foam Surfaces)	MINIMUM APPLICATION RATE OF INTUMESCENT COATING	TEST SUBMITTED
14	8	DC315 18 wet mils	1.13 gal /100 ft ²	NFPA 286
14	9	No-Burn [®] Plus ThB 14 wet mils	0.88 gal / 100 ft ²	NFPA 286

TABLE 3B – USE OF INSULATION IN ATTICS AND CRAWLSPACES WITHOUT A PRESCRIPTIVE IGNITION BARRIER

MAXIMUM THICKNESS FOR UNDERSIDE OF ROOF SHEATHING/RAFTERS AND FLOORS (inches)	MAXIMUM THICKNESS FOR WALL CAVITIES AND ATTIC FLOOR (inches)	INTUMESCENT COATING MINIMUM THICKNESS (Applied to all Exposed Foam Surfaces)	MINIMUM APPLICATION RATE OF INTUMESCENT COATING	TEST SUBMITTED (AC377)
14	8 ½	DC315 4 wet mils	0.25 gal / 100 ft ²	Appendix X
14	8 ½	FS-IB [™] 5 wet mils	0.29 gal / 100 ft ²	Appendix X
14	9	No-Burn [®] Plus ThB 6 wet mils	0.38 gal / 100 ft ²	Appendix X