

Issue Date: 08-30-2013
Revision Date: 08-29-2018
Renewal Date: 08-30-2019

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 21 00 – Thermal Insulation

REPORT HOLDER:
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REPORT SUBJECT:
EnergyGuard™ Polyiso Insulated Sheathing
EnergyGuard™ NH Polyiso Insulated Sheathing

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2018, 2015 and 2012 *International Building Code*® (IBC)
- 2018, 2015 and 2012 *International Residential Code*® (IRC)

NOTE: This report references 2018 Code sections with [2015] Code sections shown in brackets where they differ. When the 2015 and 2012 have different codes, they will be indicated as [2015, 2012].

1.2 General – *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* have been evaluated for the following properties:

- Surface Burning Characteristics
- Physical Properties
- Thermal Performance

1.3 General – *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* have been evaluated for the following uses:

- Rigid insulation panels with a closed-cell polyisocyanurate foam core used for non-structural thermal insulating material.

2.0 STATEMENT OF COMPLIANCE

EnergyGuard™ Polyiso Insulated Sheathing and *EnergyGuard™ NH Polyiso Insulated Sheathing* 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 Materials and Processes - *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* have foam plastic core faced on each side with a 50 # Kraft paper and 27-mil aluminum foil facing.

3.2 Profiles - *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* are produced in panels measuring 4 feet by 8 feet with thicknesses from 0.5 inch (12.7 mm) to 2 inches (50.8 mm).

4.0 PERFORMANCE CHARACTERISTICS

4.1 *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* are classified as Type 1, Class 1 in accordance with ASTM C1289-15.

4.2 The foam core has a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with UL 723-08 at a maximum thickness of 2 inches and a maximum density of 2 lb/ft³.

4.3 At a minimum thickness of 0.5 inches, *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* have a vapor permeance less than 0.3 as determined by ASTM E96, Procedure A.



4.4 Thermal resistance (R-value) of sheathing boards when tested at a mean temperature of 75±2°F are detailed in Table 1.

5.0 INSTALLATION

5.1 General:

EnergyGuard™ Polyiso Insulated Sheathing and *EnergyGuard™ NH Polyiso Insulated Sheathing* 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:

5.2.1 *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* are installed so that the longest edge is positioned vertically with the edges resting on the middle of the stud. Board joints are in contact with each other. The printed side shall face the exterior when installed on the exterior of walls and face the interior when installed on the interior side of walls.

5.2.2 Boards are fastened using galvanized ring shank nails with minimum 3/8 inch diameter heads or staples with minimum 1 inch diameter plastic caps. Fasteners must be long enough to penetrate the substrate at least 3/4 inch. *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* are fastened 12 inches o.c. around the perimeter and 16 inches o.c. in the field or as required by local codes. Fasteners must not be over driven.

5.2.3 All openings and penetrations are sealed with an all-weather sealant such as silicone caulk prior to taping. Make sure that all areas are clean prior to sealing and taping to ensure proper adhesion.

5.2.4 Three inch wide foil flashing tape is centered and applied to all board joints, penetrations, window flanges and door edges. Tape and sealant is applied in accordance with the manufacturer's application instructions.

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 *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* identified in this report is limited to non-structural exterior and interior wall use in Type V (IBC) construction and structures constructed in accordance with the IRC.

6.3 The insulation boards must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4 or IRC Section R316.4 as applicable.

6.4 Exception: Within an attic or crawl space where entry is made only for service of utilities, the insulation board shall be protected against ignition with a protective barrier conforming to IBC Section 2603.4.1.6 and, IRC Section R316.5.3 and R316.5.4.

6.5 In areas of high humidity as required by local codes and when used in the construction of walls, a vapor retarder must be installed in accordance with IBC Section 1404.3 [1405.3] or IRC R702.7.

6.6 In areas where the probability of termite infestation is "very heavy" the installation must meet the requirements of IBC section 2603.8 [2603.8, 2603.9], or IRC Section R318.4 as applicable.

6.7 When used on exterior stud framed walls, *EnergyGuard™ Polyiso Insulated Sheathing* and *EnergyGuard™ NH Polyiso Insulated Sheathing* shall be installed directly to the exterior framed stud wall or directly to code compliant exterior structural sheathing and covered with a code-approved exterior cladding system such as vinyl siding, wood siding, aluminum siding, brick or stucco. Walls must be structurally braced in accordance with IBC sections 2308.6 [2308.6, 2308.9.3] and 2308.6 [2308.6, 2308.12.4] or IRC Section R602.10 as applicable. In areas of high humidity or as required by local code, a water resistive barrier may be installed. The insulation boards must be separated from the interior of the building by an



approved thermal barrier in accordance with IBC Section 2603.4 or IRC Section R316.4 as applicable.

6.8 EnergyGuard™ Polyiso Insulated Sheathing and EnergyGuard™ NH Polyiso Insulated Sheathing shall not be left exposed to weather and shall not be exposed to high heat sources.

6.9 EnergyGuard™ Polyiso Insulated Sheathing and EnergyGuard™ NH Polyiso Insulated Sheathing is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Manufacturer's drawings and installation instructions.

7.2 Reports of testing demonstrating compliance with ASTM C1289-15, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation, UL 723-08, Surface Burning Characteristics of Building Materials and, ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12) revised October 2017.

7.3 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

EnergyGuard™ Polyiso Insulated Sheathing and EnergyGuard™ NH Polyiso Insulated Sheathing are identified with:

- The manufacturer's name (GAF)
- The Manufacture's address and telephone number

- The product name (*EnergyGuard™ Polyiso Insulated Sheathing and EnergyGuard™ NH Polyiso Insulated Sheathing*)
- Insulation specification Type 1 Class 1
- Lot number
- Thermal Resistance value
- The Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0197).



9.0 OTHER CODES

This section is not applicable.

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.

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TABLE-1 R-VALUE (°F FT² H/BTU)

Thickness (in)	.5	.75	1.0	1.25	1.5	1.75	2.0
EnergyGuard	3.6	5.0	6.0	7.6	8.9	10.3	11.7
EnergyGuard NH			6.2				

