



CERTIFICATION



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Technical Evaluation Report

TER 1808-05

Ox ISO RED CI, ISO RED MAX, ISO
RED MAX WF, ISO RED MAX GF, ISO
RED MAX LD, & ISO RED MAX HD
Foam Plastic Insulating Sheathing –
Limit States – Canada

Ox Engineered Products, LLC

Product:

**ISO RED Polyiso Foam Insulated
Sheathing Products**

Issue Date:

November 19, 2018

Revision Date:

November 13, 2020

Subject to Renewal:

April 1, 2021



COMPANY
INFORMATION:

ADDITIONAL
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DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION

SECTION: 07 20 00 - Thermal Protection

SECTION: 07 21 00 - Thermal Insulation

SECTION: 07 22 00 - Roof and Deck Insulation

SECTION: 07 25 00 - Water-Resistive Barriers/Weather Barriers

SECTION: 07 27 00 - Air Barriers

1 PRODUCTS EVALUATED¹

1.1 ISO RED Polyiso Foam Insulated Sheathing Products

- 1.1.1 ISO RED CI Polyiso Foam Insulated Sheathing
- 1.1.2 ISO RED MAX Polyiso Foam Insulated Sheathing
- 1.1.3 ISO RED MAX WF Polyiso Foam Insulated Sheathing
- 1.1.4 ISO RED MAX GF Polyiso Foam Insulated Sheathing
- 1.1.5 ISO RED MAX LD Polyiso Foam Insulated Sheathing
- 1.1.6 ISO RED MAX HD Polyiso Foam Insulated Sheathing

2 APPLICABLE CODES AND STANDARDS^{2,3}

2.1 Codes

- 2.1.1 *NBC—10, 15: National Building Code of Canada*
- 2.1.2 *NECB—17: National Energy Code of Canada for Buildings*

2.2 Standards and Referenced Documents

- 2.2.1 *AAMA 711: Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*
- 2.2.2 *ASTM C1289: Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board*

¹ For more information, visit drjcertification.org or call us at 608-310-6748.

² Unless otherwise noted, all references in this TER are from the 2015 version of the NBC. This *alternative solution* is also approved for use with the 2010 NBC and the standards referenced therein.

³ All terms defined in the applicable building codes are italicized.

- 2.2.3 *ASTM C203: Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation*
- 2.2.4 *ASTM C209: Standard Test Methods for Cellulosic Fiber Insulating Board*
- 2.2.5 *ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*
- 2.2.6 *ASTM D2126: Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging*
- 2.2.7 *ASTM E119: Standard Test Methods for Fire Tests of Building Construction and Materials*
- 2.2.8 *ASTM E1354: Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*
- 2.2.9 *ASTM E2178: Standard Test Method for Air Permeance of Building Materials*
- 2.2.10 *ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*
- 2.2.11 *ASTM E331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*
- 2.2.12 *ASTM E96: Standard Test Methods for Water Vapor Transmission of Materials*
- 2.2.13 *CAN/ULC-S102: Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies*
- 2.2.14 *CSA O86: Engineering Design in Wood*
- 2.2.15 *CWC: Engineering Guide for Wood Frame Construction*
- 2.2.16 *SBCA ANSI/FS 100: Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies*

3 PERFORMANCE EVALUATION

3.1 ISO RED CI has been evaluated to determine:

- 3.1.1 Wind-pressure resistance performance for use as part of an exterior wall covering assembly in accordance with *NBC Division B Subsection 4.1.7* and *ANSI/FS100*
- 3.1.2 Performance in accordance with the foamed plastic requirements of *NBC Division B Article 3.1.5.15*
- 3.1.3 Performance for use as continuous insulating sheathing in accordance with *NBC Division B Part 5* and *Article 9.36.2.5* and *9.36.2.6*
- 3.1.4 Performance for use as a water-resistive barrier (WRB) in accordance with *NBC Division B Note A-5.6.2.1*
- 3.1.5 Performance for use as a vapor retarder in accordance with *NBC Division B Subsection 9.25.4*
- 3.1.6 Performance for use as an air barrier in accordance with *NBC Division B Section 5.4* and *Subsection 9.25.3*
- 3.1.7 Performance for surface burning characteristics in accordance with *NBC Division B Subsection 3.1.12* and *9.10.3.2*
- 3.1.8 Performance of ISO RED CI for vertical and lateral fire propagation is outside the scope of this TER.

3.2 ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD have been evaluated to determine:

- 3.2.1 Performance in accordance with the foamed plastic requirements of *NBC Division B Article 3.1.5.15*
- 3.2.2 Performance for use as continuous insulating sheathing in accordance with *NBC Division B Part 5* and *Article 9.36.2.5* and *9.36.2.6*
- 3.2.3 Performance for use as a vapour retarder in accordance with *NBC Division B Subsection 9.25.4*
- 3.2.4 Performance for use as an air barrier in accordance with *NBC Division B Section 5.4* and *Subsection 9.25.3*

- 3.2.5 Performance for surface burning characteristics in accordance with *NBC* Division B Subsection 3.1.12 and 9.10.3.2
- 3.2.6 Performance for vertical and lateral fire propagation is outside the scope of this TER
- 3.2.7 Performance of for wind-pressure resistance and for use as a WRB is outside the scope of this TER.
- 3.3 This TER does not address wind-pressure resistance requirements for ISO RED CI used as part of an Exterior Insulation Finish System (EIFS). Refer to the EIFS manufacturer's installation instructions for building-code compliance.
- 3.4 These products shall comply with the material standards listed in Section 2 and shall be applied to exterior wall construction in accordance with the general requirements of Section 6. ISO RED CI shall also comply with the prescriptive wind-pressure resistance requirements of Section 5.6.
- 3.5 ISO RED CI used in accordance with this TER that is required to resist wind pressure in exterior wall covering assemblies shall also comply with the product marking requirements of Section 10, and the conditions of use listed in Section 8.
- 3.6 Any code compliance issues not specifically addressed in this section are outside the scope of this TER.
- 3.7 Any engineering evaluation conducted for this TER was performed on the dates provided in this TER and within DrJ's professional scope of work.

4 PRODUCT DESCRIPTION AND MATERIALS

4.1 ISO RED CI

- 4.1.1 ISO RED CI (Figure 1) is a Type 1, Class 1 Dual Faced Rigid Cellular Polyisocyanurate Insulation Board product as defined in *ASTM C1289*.
- 4.1.2 ISO RED CI consists of a proprietary polyisocyanurate rigid board, with facers on both sides. The facers are designed with a base foil layer, with which layers of other material(s) are combined.

4.2 ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD, ISO RED MAX HD

- 4.2.1 These products are Type 1, Class 2 Dual Faced Rigid Cellular Polyisocyanurate Insulation Board products as defined in *ASTM C1289*.
- 4.2.2 These products consist of a proprietary polyisocyanurate rigid board, with facers on both sides. The facers are designed with a base foil layer. Facer material thicknesses vary by product.



FIGURE 1. ISO RED CI (LEFT) & ISO RED MAX (RIGHT)

4.3 Material Availability

- 4.3.1 *Thicknesses:*
 - 4.3.1.1 ISO RED CI – range from 12.7 mm (0.5") up to 50.8 mm (2.0")
 - 4.3.1.2 ISO RED MAX (including WF, GF, LD, and HD) – up to 102 mm (4.0")
- 4.3.2 Standard product width: 1219 mm (48")
- 4.3.3 Standard lengths: 2438, 2743 and 3048 mm (96", 108", and 120")

5 APPLICATIONS

- 5.1 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD are used in buildings constructed in accordance with *NBC* Division B Section 9.23 for wood frame construction.
- 5.2 ISO RED CI is foamed plastic insulation used as wall sheathing in accordance with *NBC* Division B Articles 3.1.5.15 and 9.10.17.10.
- 5.3 ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD are foamed plastic insulation used as wall sheathing in accordance with *NBC* Division B Articles 3.1.5.15 and 9.10.17.10.
- 5.4 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD must be used with full protection from the interior of the building by an approved thermal barrier in accordance with *NBC* Division B Note A-3.1.4.2.(1)(c), and Sentence 3.1.5.15.(2) and Clause 9.10.17.10(1)(c).
- 5.5 Where the application exceeds the limitations set forth herein, design shall be permitted in accordance with accepted engineering procedures, experience, and technical judgment.

5.6 *Transverse Loads*

- 5.6.1 ISO RED CI may be used to resist wind loads transverse to the face of the wall, as shown in Table 1.
- 5.6.2 Required component-and-cladding loads to be resisted are found in in *NBC* Division B Subsection 4.1.7 (see Sentence 4.1.7.1.(5)).
- 5.6.3 As stated in Section 3.2.6, performance of ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD for wind-pressure resistance is outside the scope of this TER.

TABLE 1. SUMMARY OF SPECIFIED PRESSURES FOR ISO RED CI RESISTING TRANSVERSE WIND LOADS

ISO RED CI Nominal Thickness mm (in)	Hourly 1-in-50 Wind Pressure ¹ kPa (psf)
25.4 (1)	2.0 (42)
SI: 25.4 mm = 1 in, 1 MPa = 145 psi 1. Hourly Wind Pressure (1-in-50) for selected locations are listed in <i>NBC</i> Division B, Appendix C, Table C-2.	

5.7 *Thermal Resistance*

- 5.7.1 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD are used as foamed plastic insulation in wall, roof and ceiling assemblies.
- 5.7.2 These products meet the continuous insulating sheathing requirements complying with the provisions of *NBC* Division B Part 5 and Articles 9.36.2.5 and 9.36.2.6.
- 5.7.3 These products have the thermal properties shown in Table 2.

TABLE 2. ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD AND ISO RED MAX HD THERMAL RESISTANCE PROPERTIES

Product	Thickness mm (in)	RSI (R) Values ¹ m ² °K/W (h ² ft ² °F/Btu)
ISO RED CI	50.8 (2.0)	2.3 (13.0)
	39.4 (1.55)	1.8 (10.0)
	25.4 (1.0)	1.1 (6.5)
	19.1 (0.75)	0.9 (5.0)
	12.7 (0.5)	0.6 (3.3)
ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD, and ISO RED MAX HD	101.6 (4.0)	4.4 (25.2)
	88.9 (3.5)	3.9 (22.1)
	76.2 (3.0)	3.3 (19.0)
	63.5 (2.5)	2.8 (16.0)
	50.8 (2.0)	2.3 (13.0)
	39.4 (1.55)	1.8 (10.0)
	25.4 (1.0)	1.1 (6.3)
	19.1 (0.75)	0.9 (5.0)
12.7 (0.5)	0.6 (3.2)	

SI: 25.4 mm = 1 in

1. Thermal values are determined using the ASTM C518 test method at 23.9°C (75°F) mean temperature on material conditioned according to ASTM C1289 Section 11.1 (Degrees F.ft².h/Btu).

5.8 Air Barrier

- 5.8.1 Wall and ceiling assemblies constructed with ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD are used to meet air-barrier requirements in accordance with NECC Division B Part 3.
- 5.8.2 All penetrations shall be flashed and sealed in accordance with the flashing manufacturer’s installation instructions. Self-adhered flashing tape shall meet AAMA 711 (FortiFlash® Butyl or equivalent).
- 5.8.3 These products are defined as air-barrier materials having an air permeance of less than 0.02 L/s*m², in accordance with NBC Division B Article 5.4.1.2.

5.9 Water-Resistive Barrier

- 5.9.1 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD are approved as the second plane of protection in accordance with NBC Division B Article 9.27.3.4 when installed with 63-mm (2½") -wide 3M (8087), White 3M Venture 1558 HT, Venture 1520 CW Aluminum Foil Sheathing Tape or equivalent on all sheathing seams. 102 mm (4") wide self-adhered flashing tape meeting AAMA 711 (FortiFlash® Butyl or equivalent) with release liner may be required for effective taping of inside and outside corners. See the manufacturer's product information for further details.
- 5.9.2 ISO RED CI shall be installed with board joints placed directly over exterior framing spaced a maximum of 610 mm (24") o.c. The fasteners used to attach the board shall be installed in accordance with Section 6.
- 5.9.3 A separate sheathing membrane may also be provided. If a separate sheathing membrane method is used, taping of the sheathing joints is not required.

5.9.4 Flashing of penetrations shall comply with the applicable code and must be installed at all sheathing penetrations. Use qualified flashing material such as self-adhered flashing tape meeting AAMA 711 (3M All Weather Flashing Tape 8067 or equivalent). See Figure 2, Figure 3, and Figure 4 for typical penetration flashing details.

5.9.5 Flashing Details – Typical Flanged and Unflanged Penetration and Flanged Window

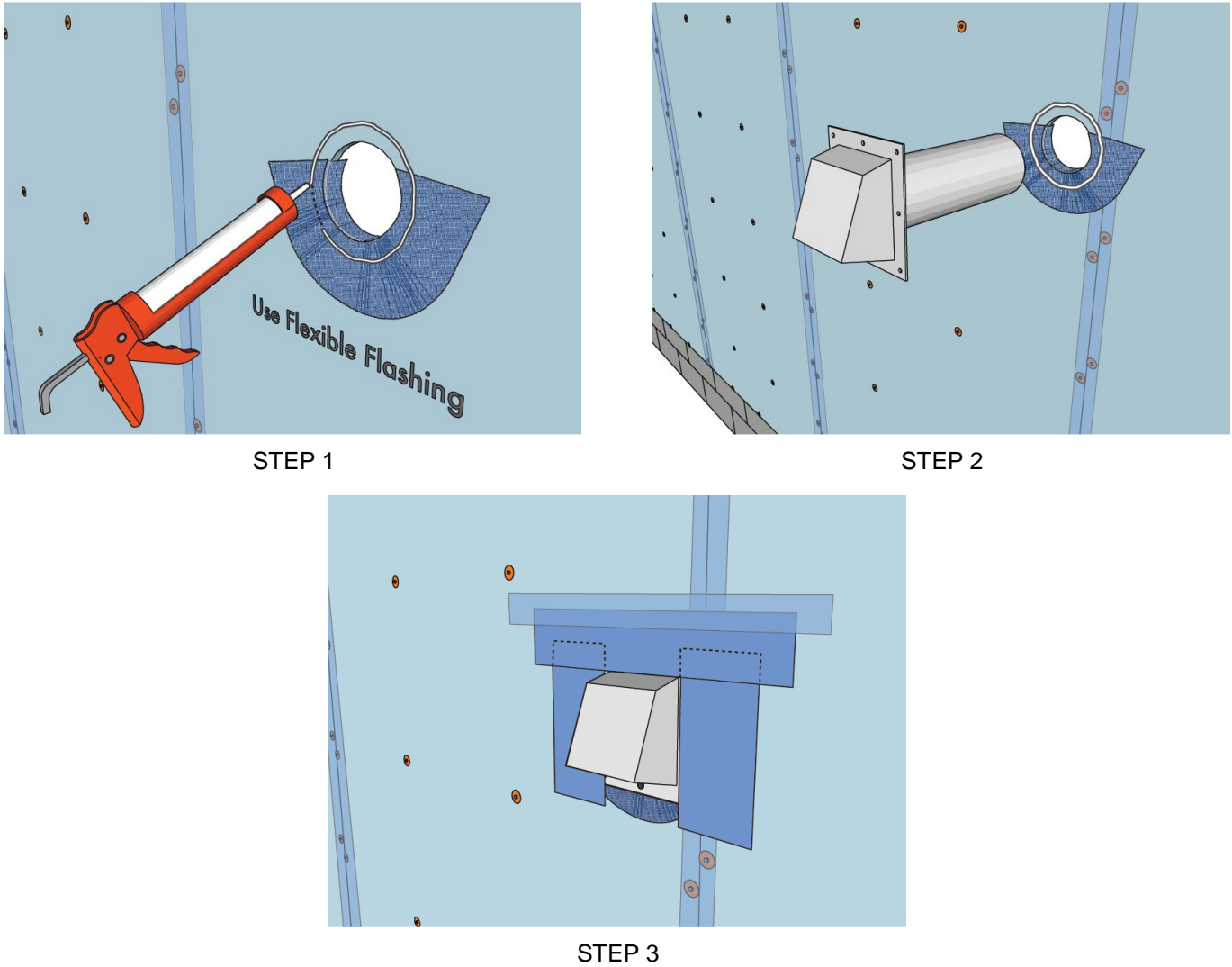


FIGURE 2. TYPICAL PENETRATION FLASHING DETAIL – FLANGED

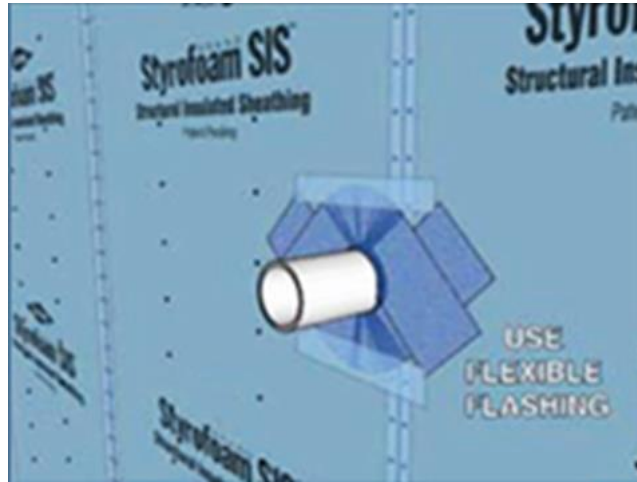


FIGURE 3. TYPICAL PENETRATION FLASHING DETAIL – UNFLANGED

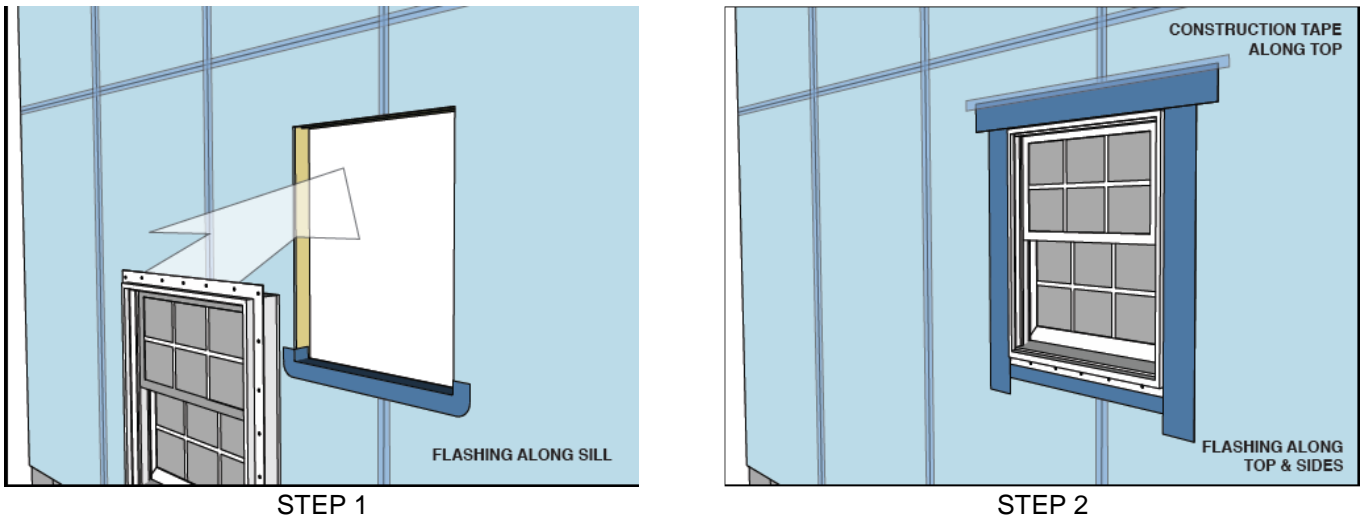


FIGURE 4. TYPICAL WINDOW FLASHING DETAIL

5.10 Fire Safety Performance

5.10.1 Surface Burn Characteristics:

5.10.1.1 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD, ISO RED MAX HD and ISO RED MAX SRONG-R have the flame-spread ratings as shown in Table 3, when tested in accordance with CAN/ULC-S102 per NBC Division B Subsection 3.1.12 and 9.10.3.2.

TABLE 3. SURFACE BURN CHARACTERISTICS OF ISO RED CI & ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD, AND ISO RED MAX HD

Product	Flame Spread	Smoke Developed
ISO RED CI ¹	60	35
ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD, ISO RED MAX HD, and ISO RED MAX STRONG-R ²	20	125

1. Tested in accordance with CAN/ULC-S102, with maximum foam thickness of 2".
 2. Tested in accordance with CAN/ULC-S102, with maximum foam thickness of 4".

5.10.2 Thermal Barrier

5.10.2.1 ISO RED CI, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD shall be fully protected from the interior of the building by an approved thermal barrier as required by NBC Division B Article 9.10.17.10.

6 INSTALLATION

6.1 Installation shall comply with the manufacturer’s installation instructions and this TER. In the event of a conflict between the manufacturer’s installation instructions and this TER, the more restrictive shall govern. See The Foam Sheathing Committee (FSC) Best Practices guide for further details.

6.2 Installation Procedure

6.2.1 These products may be cut to size with a utility knife, handsaw, or power saw.

TABLE 4. ATTACHMENT INFORMATION

Application ¹	Stud Spacing ² mm (in)	Attachment Method	Fastener Spacing
Wood Framing	406 (16) or 610 (24)	Capped nails, capped staples or roofing nails (approximate 25 mm (1") framing embedment)	305 mm (12") Perimeter 305 mm (12") Field
Metal Framing	406 (16) or 610 (24)	Corrosion-resistant self-tapping screws with 25.4 mm (1") diameter cap or washer (approximate 25 mm (1") framing embedment)	305 mm (12") perimeter 305 mm (12") field
Interior Masonry or Concrete	N/A	Suitable construction adhesive or masonry fasteners with 25.4 mm (1") diameter cap or washer, or combination of adhesive & mechanical fasteners (approximate 25 mm (1") embedment into substrate)	Adhesive beads spaced 406 mm (16") horizontally & full-perimeter mechanical fasteners 305 mm (12") perimeter and 305 mm (12") field, spaced 406 mm (16") horizontally
Exterior Masonry or Concrete Below Grade	N/A	Granular water-draining fill	Only as required to ensure intimate contact to masonry surface or water-proofed surface

SI: 25.4 mm = 1 in

- Butt panels tightly and seal all joints, where intrusion of bulk moisture or moisture vapor is undesirable, with sealant and/or approved tape.
- Panels used to resist transverse wind pressure or used as a WRB shall be installed on studs spaced a maximum of 410 mm (16") o.c and all panel edges shall be located on framing or blocking.

6.2.2 Windows and doors shall be installed in accordance with the manufacturer’s installation instructions.

6.2.3 Windows, door openings and other penetrations shall be flashed in accordance with NBC Division B Article 9.7.6.2.

6.2.4 Follow the manufacturer's instructions for installation of claddings and rain screens over these products.

7 SUBSTANTIATING DATA

7.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:

- 7.1.1 Evaluation and analysis of testing, data and reporting of thermal properties in accordance with ASTM C518 performed by LaserComp
- 7.1.2 Evaluation and analysis of testing, data and reporting of material properties in accordance with ASTM C1289 by Architectural Testing, Inc., an Intertek company
- 7.1.3 Evaluation and analysis of testing, data and reporting of fire-resistance testing performed in accordance with ASTM E119 conducted by Architectural Testing, Inc., an Intertek company

- 7.1.4 Evaluation and analysis of testing, data and reporting of transverse wind pressure performed in accordance with *ASTM E330* conducted by an ISO/IEC 17025 accredited testing laboratory under contract with Qualtim, Inc.
- 7.1.5 Evaluation and analysis of testing data and reporting of water penetration performed in accordance with *ASTM E331* by Uniform Static Air Pressure Difference, conducted by NTA, Inc
- 7.1.6 Evaluation and analysis of testing, data and reporting of air permeance in accordance with *ASTM E2178* conducted by Architectural Testing, Inc., an Intertek company
- 7.1.7 Evaluation and analysis of testing, data and reporting of surface burning characteristics in accordance with *CAN/ULC S102* conducted by Intertek
- 7.2 ISO RED CI Quality Control Manual in accordance with a third-party quality control program with inspections conducted by an approved agency.
- 7.3 Information contained herein is the result of testing and/or data analysis by sources which conform to the evaluation requirements of *NBC Volume 1 Relationship of the NBC to Standards Development and Conformity Assessment* and/or professional engineering regulations. DrJ relies upon accurate data to perform its ISO/IEC 17065 evaluations.
- 7.4 Where appropriate, DrJ's analysis is based on provisions that have been codified into law through provincial, territorial, or local adoption of codes and standards. The providers of the codes and standards are legally responsible for their content. DrJ analysis may use code adopted provisions as a control sample. A control sample versus a test sample establishes a product as being equivalent to that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the accuracy of the provisions provided herein is reliant upon the published properties of materials, DrJ relies upon the grade mark, grade stamp, mill certificate, and/or test data provided by material suppliers to be minimum properties. DrJ analysis relies upon these properties to be accurate.

8 FINDINGS

- 8.1 When used and installed in accordance with this TER and the manufacturer's installation instructions, ISO RED CI complies with, or is a suitable alternative to, the applicable sections of the codes listed in Section 2 for the following applications:
 - 8.1.1 Wind-pressure resistance performance for use as part of an exterior wall covering assembly in accordance with in accordance with *NBC Division B Subsection 9.23.13* and *ANSI/FS100*
 - 8.1.2 Performance in accordance with the foamed plastic requirements *NBC Division B Article 3.1.5.15*
 - 8.1.3 Performance for use as continuous insulating sheathing in accordance with *NBC Division B Part 5* and Article 9.36.2.5
 - 8.1.4 Performance for use as a WRB in accordance with *NBC Division B Note A-5.6.2.1*
 - 8.1.5 Performance for use as a vapor retarder in accordance with *NBC Division B Subsection 9.25.4*
 - 8.1.6 Performance for use as an air barrier in accordance with *NBC Division B Section 5.4* and Subsection 9.25.3.
 - 8.1.7 Surface burning characteristics in accordance with *NBC Division B Subsection 3.1.12* and 9.10.3.2.
- 8.2 When installed in accordance with the manufacturer's installation instructions and this TER, ISO RED MAX, ISO RED MAX WF, ISO RED MAX GF, ISO RED MAX LD and ISO RED MAX HD comply with, or are a suitable alternative to, the applicable sections of the codes listed in Section 1.1.6 for the following applications:
 - 8.2.1 Performance in accordance with the foamed plastic requirements of *NBC Division B Article 3.1.5.15*.
 - 8.2.2 Performance for use as continuous insulating sheathing in accordance with *NBC Division B Part 5* and Article 9.36.2.5.
 - 8.2.3 Performance for use as a vapour retarder in accordance with *NBC Division B Subsection 9.25.4*.
 - 8.2.4 Performance for use as an air barrier in accordance with *NBC Division B Section 5.4* and Subsection 9.25.3.
 - 8.2.5 Surface burning characteristics in accordance with *NBC Division B Subsection 3.1.12* and 9.10.3.2.

8.3 This product has been evaluated in the context of the codes listed in Section 2 and is compliant with all known provincial, territorial, and local building codes. Where there are known variations in provincial, territorial, or local codes applicable to this TER, they are listed here.

8.3.1 No known variations

8.4 *NBC* Volume 1 Relationship of the NBC to Standards Development and Conformity Assessment:

Certification

Certification is the confirmation by an independent organization that a product or service meets a requirement...Certification bodies publish lists of certified products and companies.

Evaluation

An evaluation is a written opinion by an independent professional organization that a product will perform its intended function in a building. An evaluation is very often done to determine the ability of an innovative product, for which no standards exist, to satisfy the intent of the Code requirement...Several organizations, including the Canadian Construction Materials Centre (CCMC), offer such evaluation services.

8.5 Valid *evaluations* are obtained from *independent professional organizations*, which include but are not limited to ISO/IEC 17065 accredited evaluation services and professional engineers.⁴

8.6 ISO/IEC 17065 accreditation bodies, including but not limited to SCC and ANAB, confirm that product certification bodies have the expertise to provide *evaluation* services within their scope of accreditation. All SCC and ANAB product certification bodies meet *NBC* requirements to offer *evaluation* services for *alternative solutions*.⁵

8.6.1 DrJ is an ISO/IEC 17065 ANAB-Accredited Product Certification Body – Accreditation #1131 and employs professional engineers.⁶

8.7 Product certification organizations, accredited by the SCC and ANAB, are defined as equivalent *evaluation* services:

8.7.1 The Canada-United States-Mexico Agreement (CUSMA) Article 11.6 Conformity Assessment confirms mutual recognition by stating, "...each Party shall accord to conformity assessment bodies located in the territory of another Party treatment no less favorable than that it accords to conformity assessment bodies located in its own territory or in the territory of the other Party."

8.7.2 The SCC National Conformity Assessment Principles states, "SCC is a member of a number of international organizations developing voluntary conformity assessment agreements that help ensure the international acceptance of Canadian conformity assessment results. Signatories to these agreements (like SCC) recognize each other's accreditations as being equivalent to their own."⁷

8.8 Building official approval of a licensed professional engineer is performed by verifying the professional engineer and/or their business entity are listed by the licensing board of the relevant jurisdiction.

9 CONDITIONS OF USE

9.1 ISO RED CI shall be fully protected from the interior of the building by an approved 15-minute thermal barrier or ignition barrier where required by the applicable code

⁴ *NBC* Division C Article 2.2.1.2

⁵ *NBC* Division A Clause A-1.2.1.1.(1)(b) provides information on code compliance via alternative solutions and defines alternative solutions as "...achiev[ing] at least the minimum level of performance required by Division B." *NBC* Division C Section 2.3 includes additional guidance for documentation of alternative solutions.

⁶ Through ANAB accreditation and the IAF MLA, DrJ certification can be used to obtain material, product, design, or method of construction approval in any jurisdiction or country that has IAF MLA Members & Signatories to meet the Purpose of the MLA – "certified once, accepted everywhere."

⁷ The National Conformity Assessment Principles states, "Product regulations and standards may vary from country to country. If these are set arbitrarily, they could be deemed as protectionist. The World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT Agreement) is intended to ensure that technical regulations, standards and conformity assessment procedures of member countries do not create unnecessary obstacles to trade. Under the TBT Agreement, members of the WTO agree to use international standards, including conformity assessment standards and guides, as a basis for their technical requirements."

- 9.2 These products shall not be used as a structural nailing base for claddings.
- 9.3 In areas where termites are known to occur, and foundations are insulated or otherwise finished in a manner that could conceal a termite infestation, in accordance with *NBC* Division B Article 9.3.2.9, a metal or plastic barrier shall be installed through the insulation to control the passage of termites behind or through the insulation.
- 9.4 Walls sheathed with these products must not be used to resist horizontal loads from concrete or masonry walls.
- 9.5 When using these products, the stud walls shall be braced by other materials in accordance with the applicable code.
- 9.6 Where required by the *authority having jurisdiction* (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of permit application.
- 9.7 Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the AHJ for review and approval.
- 9.8 Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed and/or by the *designer* (e.g., *owner*).
- 9.9 At a minimum, this product shall be installed per Section 6 of this TER.
- 9.10 This product has an internal quality control program and a third-party quality assurance program in accordance with ISO/IEC 17065 certification procedures.
- 9.11 The actual design, suitability, and use of this TER, for any particular building, is the responsibility of the owner or the owner's authorized agent.
- 9.12 This TER shall be reviewed for code compliance by the AHJ in concert with the duties and powers granted to the building official by the provincial regulations governing such duties and powers.
- 9.13 The implementation of this TER for this product is dependent on the design, quality control, third-party quality assurance, proper implementation of installation instructions, inspections, and any other code or regulatory requirements that may apply.

10 IDENTIFICATION

- 10.1 The product(s) listed in Section 1.1 are identified by a label on the board or packaging material bearing the manufacturer's name, product name, TER number, and other information to confirm code compliance.
- 10.2 Additional technical information can be found at oxengineeredproducts.com.

11 REVIEW SCHEDULE

- 11.1 This TER is subject to periodic review and revision. For the most recent version, visit drjcertification.org.
- 11.2 For information on the current status of this TER, contact DrJ Certification.