

**Evaluation Report CCMC 13103-R
Durex Flexlite/Durex Insulite/Durex Quantum/
Durex Equalite/Durex Panelite/Durex IBS/Durex Cladlite**

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Durex Flexlite includes:	Flexlite Select, Flexlite Select MF, Flexlite Select ICF, Flexlite ADH, Flexlite MF
Durex Insulite includes:	Insulite Select, Insulite Select MF, Insulite Select ICF, Insulite EW-17, Insulite EXT ADH
Durex Quantum includes:	Quantum Select, Quantum Select 5.0, Quantum Select MF, Quantum Select ICF
Durex Equalite includes:	Equalite Select, Equalite
Durex IBS includes:	Integrated Building System, Integrated Cladding System
Durex Panelite includes:	Panelite, Panelite ADH
Durex Cladlite includes:	Cladlite, Cladlite ADH

1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “Durex Flexlite/Durex Insulite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite,” when used as exterior insulation and finish systems (EIFS) (wall cladding that is designed to provide thermal insulation and a weather barrier) in accordance with the conditions and limitations stated in Section 3 of this Report, comply with the National Building Code (NBC) of Canada 2015:⁽¹⁾

- Clause 1.2.1.1.(1)(a) of Division A, using the following acceptable solutions from Division B:
 - Article 3.1.5.5., Combustible Cladding on Exterior Walls
 - Clause 3.1.5.15.(2)(a), Foamed Plastic Insulation
 - Clause 3.2.3.8.(1)(b),⁽²⁾ Protection of Exterior Building Face
 - Sentence 5.6.1.1.(1), Required Protection from Precipitation
 - Subsection 5.9.4.,⁽³⁾ Exterior Insulation Finish Systems
 - Clause 9.25.2.2.(1)(d), Insulation Materials (CAN/ULC-S701-11, “Thermal Insulation, Polystyrene, Boards and Pipe Covering”)
 - Clause 9.25.2.2.(1)(e), (CAN/ULC-S702-09, “Mineral Fibre Thermal Insulation for Buildings”)
 - Sentence 9.27.1.1.(5), General (Cladding, Application)
 - Article 9.27.2.1., Minimizing and Preventing Ingress and Damage
 - Clause 9.27.2.2.(1)(e), Minimum Protection from Precipitation Ingress
 - Sentence 9.27.2.3.(1), First and Second Planes of Protection
 - Article 9.27.3.1., Elements of the Second Plane of Protection
 - Subsection 9.27.13., Exterior Insulation Finish Systems

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1. The products comply with the requirements of the NBC 2010 and 2015 simultaneously.
 2. See Section 4.1.2, Fire Performance, of this Report.
 3. Conformance to Subsection 5.9.4. is limited to systems meeting, at minimum, the requirements of Clause 9.27.13.1.(1)(b) and Article 9.27.13.2. of Division B of the NBC 2015.
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This opinion is based on CCMC's evaluation of the technical evidence in Section 4.1 provided by the Report Holder. Ruling No. 04-04-108 (13103-R), authorizing the use of this product in Ontario, subject to the terms and conditions contained in the Ruling, was made by the Minister of Municipal Affairs and Housing on 2004-03-30 pursuant to s.29 of the Building Code Act, 1992 (see Ruling for terms and conditions). This Ruling is subject to periodic revisions and updates.

2. Description

The products are non-loadbearing exterior insulation and finish systems (EIFS) that can be assembled in panels under factory-controlled conditions or field-applied. The systems are composed of the following key components:

- a water-resistive barrier (WRB)
 - an adhesive or mechanical fastener attachment
 - an insulation board
 - a coating system (lamina)⁽⁴⁾
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4. The lamina refers to all the coats (base coats and finish coat) that are applied to the outer face of the insulation board together with the glass-fibre mesh reinforcement.
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The following describes the different components of the systems:

2.1 Substrate

For applications falling under the scope of this Report, the substrate can be brick, masonry, monolithic concrete walls, and/or cementitious panels, glass-mat-surfaced gypsum boards, plywood or oriented strand board (OSB) over wood or steel framing. Gaps between the sheathing boards of framed walls shall not exceed 3.0 mm.

2.2 Water-Resistive Barrier (WRB)⁽⁵⁾⁽⁶⁾

5. The water-resistive barrier (WRB) is a coating or a self-adhered modified bituminous membrane that is installed to provide, along with other built-in features, the second line of defense against water infiltration reaching the structure. The WRB shall be applied in accordance with the products' installation manuals.

When the WRB is a coating, the continuity of the second plane of protection across joints and junctions at openings, penetrations and expansion joints must be maintained through the use of accessories such as self-adhering membranes, tapes, etc. as specified by the manufacturer, prior to the installation of these systems. Furthermore, in order to provide the intended level of protection against water infiltration, the coating must be installed in two coats with sufficient time between applications to allow the first coat to cure before the second coat is applied.

When the WRB is a single layer of a self-adhered modified bituminous membrane that is installed all over the substrate and around penetrations and openings, the insulation boards must be attached via mechanical fasteners to the studs or to the substrate that would have been designed to support the cladding.

The products use the following coatings as a WRB:

2.2.1 Trowel-Spray or Brush- or Roller-Applied Coatings

“Durex Flexcrete” is a ready-to-use, polymer-based, wet mix coating supplied in 30-kg pails. It is mixed on-site with “Durex Flexcrete B” cement, which is supplied in 22.7-kg bags [1:1 by unit (one bag to one pail)]. “Durex Flexcrete” is applied in a continuous layer over the substrate to achieve a minimum wet thickness of 1.5 mm to 3.0 mm.

“Durex Green Guard” is a ready-to-use, polymer-based (100% synthetic) coating supplied in 25-kg pails. It is applied in a continuous layer over the substrate to achieve a minimum wet thickness of 2.3 mm.

“Durex Blue Shield” is a ready-to-use, polymer-based (100% synthetic) coating supplied in 25-kg pails. It is applied in a continuous layer over the substrate to achieve a minimum wet thickness of 2.3 mm.

“Durex Dur-A-Mastic 100” is a ready-to-use, polymer-based (100% synthetic), coating supplied in 25-kg pails. It is applied in a continuous layer over the substrate in a continuous layer over the substrate to achieve a minimum wet thickness varying between 1.5 mm to 2.5 mm.

“Durex Ectoflex” is a two-component, flexible, polymer-based cementitious coating consisting of a ready-to-use, polymer-based, wet mix coating supplied in 10-L pails. It is mixed on-site with “Durex Ectoflex B” cement, which is supplied in 22.7-kg bags [1:1 by unit (one bag to one pail)]. “Durex Ectoflex” is light grey in colour when fully cured. It is applied in a continuous layer over the substrate to achieve a minimum wet thickness of 1.5 mm to 3.0 mm.

2.2.2 Roller-Applied WRB Coatings

“Durex AirStop” is a ready-to-use, polymer-based (100% synthetic) coating supplied in 25-kg pails. It is applied in a continuous layer over the substrate via trowel or roller application.

2.2.3 Joint, Rough Openings and Penetration Treatments

“Durex Joint Guard” is a ready-to-use, polymer-based, (100% synthetic) -coating supplied in 25-kg pails. It is intended to be used in conjunction with an application of “Durex Barrier Seam Tape,” a 100-mm wide, alkali-resistant glass-fibre mesh that is applied over all joints in the sheathing and embedded into the “Durex Joint Guard” while still wet.

Note: “Durex Joint Guard” could be replaced with “Durex Green Guard” as a joint treatment in conjunction with “Durex Barrier Seam Tape.” See description of “Durex Green Guard” in section 2.2.1, Trowel-Spray or Brush- or Roller-Applied Coatings.

“Durex EIFS Tape” is a 100–450-mm, self-adhering, rubberized flashing tape with skim facing that wraps around rough openings and penetrations.

“Durex Primerless EIFS Tape” is a 100–450-mm, self-adhering, high-performance polyester tape that wraps around rough openings and penetrations.

Note: “Durex Flexcrete,” “Durex Green Guard,” “Durex Blue Shield,” “Durex Dur-A-Mastic 100,” “Durex Ectoflex,” or “Durex AirStop” WRBs are applied in combination with “Durex EIFS Tape” or “Durex Primerless EIFS Tape” around rough openings and penetrations.

Note: In WRB applications over sheathing, all joints are to be treated prior to WRB application with a 100-mm-wide coating of “Durex Joint Guard” across the joint followed by an application of “Durex Barrier Seam Tape.” Where the sheathing joints occur in locations that are designed to accommodate deflections and/or movements and/or dissimilar substrates, “Durex Barrier Seam Tape” is replaced by “Durex EIFS Tape/Durex Primerless EIFS Tape”, lapping each side of the joint by not less than 50 mm.

2.2.4 Self-Adhered Modified Bituminous Membrane

“Durex FlexSeal Membrane” is a self-adhered modified bituminous membrane consisting of a styrene-butadiene-styrene (SBS) rubberized asphalt compound which is integrally laminated to a woven polyethylene film on one side with a silicone-treated release backing on the reverse side. The membrane has a minimum thickness of 1 mm.

Note: When a self-adhered modified bituminous membrane is used continuously over the field of the wall, no additional joint treatment is required.

2.3 Adhesives⁽⁶⁾

6. Adhesives are used for bonding the insulation to the substrate coated with the WRB. They are, in general, available in the following forms: a dry powder mix requiring the addition of water and/or cement on-site, or a wet paste that does not require any additives. Certain adhesives are also used as base coats, as in the case of “Durex Flexcrete” and “Durex Monobase.”

“Durex Flexcrete”—See description of “Durex Flexcrete” in Section 2.2.1, Trowel-Spray or Brush- or Roller-Applied Coatings.

“Durex Monobase” is a polymer-modified adhesive and base coat supplied in 22.7-kg dry bags and mixed on-site with clean potable water (4:1 by weight, dry mix to water).

“Durex VCA 3.0” is a ready-to-use, polymer-based, wet mix adhesive supplied in 30-kg pails and mixed on-site with “Durex VCA 3.0 B” cement, which is supplied in 22.7-kg bags [1:1 by unit (one bag to one pail)].

“Durex Flexcrete,” “Durex Monobase” and “Durex VCA 3.0” adhesives are applied in a continuous layer over EPS/XPS insulation boards using a stainless steel U-shaped notched trowel and rendered in such a way as to align the adhesive in vertical ribbons. The spacing between the ribbons shall range from 38–50 mm, while the size of the notches shall be 10–13 mm in width and 10–13 mm in depth.

2.4 Mechanical Fasteners⁽⁷⁾

7. Mechanical fasteners are intended to be used in conjunction with “Durex Flexlite/Durex Insulite/Durex Quantum/Durex Equalite” systems that have a self-adhered modified bituminous membrane as the WRB. The fastening of the insulation boards to the substrate should precede the application of the reinforcing mesh.

“Durex Mechanical Fasteners” consist of a corrosion-resistant anchoring screw, incorporating a low-profile, high-density polyethylene washer (“Durex WDP Plate/Durex ULP Plate”) that is used to secure the insulation. The type, spacing and frequency of the fasteners will vary depending on the type of substrate and the thickness of the insulation board. The outside face of the low-profile plastic washer should always be flush with the outside face of the EPS or mineral wool insulation board.

“Durex ULP Plate” consists of a flat, low-profile, high-density polyethylene washer to use in conjunction with “Durex Equalite MW Insulation” and “Durex Equalite Select MW Insulation” mineral wool insulation board.

“Durex WDP Plate” consists of a high-density, polyethylene washer comprised of a flat surface with a fluted protrusion on the underside of the plate to be used in conjunction with “Durex Flexlite Select MF,” “Durex Insulite Select MF,” and “Durex Quantum Select MF” EPS insulation boards.

2.5 Insulation

2.5.1 Expanded Polystyrene (EPS)

“Durex EPS” is a typical Type 1 or Type 2 flat EPS board.

“Durex XPS” is a typical Type 4 flat extruded EPS board.

“Durex Flexlite Select EPS”⁽⁸⁾ is a geometrically defined drainage cavity (GDDC) Type 1 or Type 2 EPS board, featuring vertical dovetail grooves at the back of the insulation board to allow for pressure equalization and drainage of incidental moisture that may reach the substrate-insulation interface.

“Durex Quantum Select EPS” is a geometrically defined drainage cavity (GDDC) Type 1 or Type 2 EPS board featuring vertically defined drainage channels that are 10 mm deep, 50 mm wide and 51 mm apart to allow for pressure equalization and for drainage of incidental moisture that may reach the substrate-insulation interface. (See Figure 1.0)

“Durex Insulite Select Graphite EPS” is a geometrically defined drainage cavity (GDDC) Type 1 or Type 2 EPS board infused with graphite and featuring vertical dovetail grooves at the back of the insulation board to allow for pressure equalization and for drainage of incidental moisture that may reach the substrate-insulation interface.

“Durex Quantum Select 5.0 EPS” is a geometrically defined drainage cavity (GDDC) as noted above in “Durex Quantum Select EPS” with the exception that it is a Type 3 EPS board. “Durex Quantum Select 5.0 EPS” is also available as a Type 1 or Type 2 EPS board infused with graphite in the same geometrically defined drainage cavity (GDDC) design as noted above in “Durex Quantum Select EPS.”

“Durex EPS Durex Flexlite Select/Durex Insulite Select Graphite/Durex Quantum Select EPS/Durex Quantum Select 5.0 EPS” are made from 100% virgin materials and manufactured and packaged by a Durabond Products Ltd.-approved and licensed manufacturer/molder. The insulation boards are aged in ambient air for a minimum of five weeks or kiln-dried. See Figures 2.0 and 2.3 for “Durex Flexlite Select” and “Durex Insulite Select Graphite EPS.”

“Durex EPS/Durex XPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Quantum Select 5.0 EPS/Durex Insulite Select Graphite EPS” insulation boards shall conform to the following:

- CAN/ULC-S701⁽⁹⁾, Type 1, in the case of “Durex EPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Insulite Select EPS”
- CAN/ULC-S701, Type 3, in the case of “Durex Quantum Select 5.0 EPS”
- CAN/ULC-S701, Type 4, in the case of “Durex XPS”
- Minimum board thickness of 38 mm, when using “Durex Flexlite Select EPS,” “Durex Insulite Select Graphite EPS,” “Durex Quantum Select EPS” or “Durex Quantum Select 5.0 EPS”
- Minimum board thickness of 25 mm when using “Durex EPS” or “Durex XPS”

- Maximum board thickness:
 - As designed, when used in combustible construction, and
 - 110 mm, when used in noncombustible construction
 - Maximum board size is 610 mm × 1 219 mm for “Durex EPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Quantum Select 5.0 EPS/Durex Insulite Select Graphite EPS”
 - Maximum board size is 600 mm × 2 440 mm for “Durex XPS”
 - Average density of 16 kg/m³ for “Durex EPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Insulite Select EPS” utilizing Type 1 EPS
 - Average density of 22 kg/m³ for “Durex EPS/Durex Quantum EPS/Durex Select EPS/Durex Insulite Select EPS” utilizing Type 2 EPS
 - Average density of 32 kg/m³ for “Durex Quantum Select 5.0 EPS”
 - Average density of 25 kg/m³ for “Durex XPS”
 - Flame-spread rating of 25–500, as per CAN/ULC-S102.2-10, “Test for Surface Burning Characteristics of Building Materials and Assemblies.”
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8. The aspect of pressure equalization when using “Durex Flexlite Select EPS,” “Durex Quantum Select EPS,” “Durex Quantum Select 5.0 EPS,” “Durex Insulite Select Graphite EPS,” “Durex Equalite MW Insulation,” “Durex Equalite Select MW Insulation,” “Durex EPS,” and “Durex XPS” is considered beyond the scope of the present evaluation; thus, it is not covered by the present technical opinion.
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9. Conformance to CAN/ULC-S701 shall be established through having the insulation under a recognized certification program and/or having a valid CCMC Listing.

2.5.2 Mineral Wool

“Durex Equalite MW Insulation” is a mineral wool fibre insulation made from rock and Basalt rock and slag, and manufactured and packaged for Durabond Products Ltd. by an approved manufacturer.

“Durex Equalite Select MW Insulation” is a geometrically defined drainage cavity (GDDC) mineral wool fibre insulation board featuring vertically defined drainage channels that are 10 mm deep, 50 mm wide and 250 mm apart to allow for pressure equalization and for drainage of incidental moisture that may reach the substrate-insulation interface.

The insulation boards shall be CCMC-evaluated or certified and conform to the following:

- CAN/ULC S-702
- Minimum flat board thickness of 50 mm
- Maximum board thickness of 150 mm
- Maximum board size of 600 mm × 1 219 mm
- Average density of 128 kg/m³

2.6 Synthetic Coating System (Lamina)

The synthetic coating system (lamina) consists of the reinforcing mesh, which is embedded with the base coat, and a primer and a finish coat.

2.6.1 Base Coat⁽⁹⁾

“Durex Flexcrete”—See description in Section 2.2.1, Adhesives. When used as a base coat, “Durex Flexcrete” is applied in a continuous layer over the entire surface of the EPS insulation boards to a uniform dry thickness not less than 1.6 mm using a stainless steel trowel.

“Durex Monobase”—See description in Section 2.3, Adhesives. When used as a base coat, “Durex Monobase” is applied in a continuous layer over the entire surface of the EPS insulation boards to a uniform dry thickness not less than 1.6 mm using a stainless steel trowel.

“Durex Monobase NC” is a polymer-modified adhesive and base coat supplied in 22.7-kg dry bags and mixed on-site with clean potable water (4:1 by weight, dry mix to water). “Durex Monobase NC” is noncombustible, conforming to the requirements of CAN/ULC-S114-05, “Test for Determination of Non-Combustibility in Building Materials.” When used as a base coat, “Durex Monobase NC” is applied in a continuous layer over the entire surface of the EPS/mineral wool insulation boards to a uniform dry thickness not less than 1.6 mm using a stainless steel trowel.

“Durex Uniplast” is a polymer-modified base coat supplied in 22.7-kg dry bags. It is mixed with “Durex Acrybond S,” a water-based 100% acrylic polymer cement additive (4:1 by weight, dry mix to “Durex Acrybond S”). “Durex Uniplast” is noncombustible, conforming to the

requirements of CAN/ULC-S114-05. It is applied with a stainless steel trowel to the entire surface of the EPS /XPS/mineral wool insulation to a uniform dry thickness not less than 1.6 mm per coat.

10. The thickness of the base coat required depends on the number of layers and the type of reinforcing mesh used. The base coat needs to be thicker when more than one layer of reinforcing mesh is incorporated into the lamina. Ultimately, the final thickness must be sufficiently thick to fully embed the reinforcing mesh into the lamina.

2.6.2 Reinforcing Mesh

Reinforcing Mesh is an alkali-resistant, glass-fibre reinforcing fabric that has a minimum nominal weight of 155 g/m² when using reinforcing fabric manufactured by Gavazzi S.A., and 142.5 g/m² or greater when using products manufactured by ADFORS Saint-Gobain. The mesh is white in colour and is available in rolls that are 965 mm, 241 mm, and 318 mm wide and 45.7 m long.

The reinforcing mesh is available in five different grades,⁽¹⁰⁾ represented in descending order of strength:

- “Durex Extreme Impact Resistant Mesh (21.0 oz)” (High Impact), minimum 694 g/m²,
- “Durex Ultra Impact Mesh (15.0 oz)” (High Impact), minimum 508 g/m²,
- “Durex High Impact Mesh (11.0 oz)” (Intermediate Impact), minimum 349 g/m²,
- “Durex Intermediate Impact Mesh (6.0 oz)” (Intermediate Impact), minimum 190 g/m²,
- “Durex Standard Plus Mesh (5.0 oz)” (Standard Mesh), minimum 160.0 g/m², and
- “Durex Standard Mesh (4.3 oz)” (Standard Mesh), minimum 142.5 g/m².

10. Higher grade meshes are intended to be used in areas requiring high impact resistance. All five grades of reinforcing mesh as noted above may be used in conjunction with “Durex Insulite/Durex Flexlite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite” systems.

2.6.3 Primer

“Durex Brush Coat” is a ready-mix, water-based, pigmented acrylic primer that provides a uniformly absorbent surface for “Durex Architectural Coatings,” “Durex Architectural Coatings FX,” “Durex New Generation Series,” and “Durex Classic Series” finish coats. “Durex Brush Coat” is supplied in 25-kg pails, mixed prior to use with a paddle mixer and electric drill, and applied using a roller/brush or sprayed uniformly over the “Durex Flexcrete/Durex Monobase/Durex Monobase NC/Durex Uniplast” base coats.

“Durex Dur-X-Cell 100” is a ready-mix, water-based, pigmented acrylic primer that provides a uniformly absorbent surface for “Durex Architectural Coatings FX,” “Durex New Generation Series,” and “Durex Classic Series” finish coats. “Durex Dur-X-Cell 100” is supplied in 25-kg pails, mixed prior to use with a paddle mixer and electric drill, and applied using a roller/brush or sprayed uniformly over the “Durex Flexcrete/Durex Monobase/Durex Monobase NC/Durex Uniplast” base coats.

2.6.4 Finish Coat

Products in the “Durex Architectural Coatings Series” are ready-mix, factory-tinted, polymer-based finish coats supplied in 30-kg pails. The finish coats provide a texture that is governed by the aggregate size, as well as the trowel motion used to render the wall surface. The following represents the different textures offered and their respective coating thickness:

- “Graffiato” (2.0 mm)
- “Marble Coat” (1.5 mm)
- “Sandex” (1.25 mm)
- “Stucco Spray” (1.25 mm)
- “Super Stipple” (1.0 mm)
- “Marble Coat” (1.0 mm)
- “Marble Coat” (1.8 mm)
- “Venician” (2.0 mm)
- “Pebble Float” (1.5 mm)
- “Trim Spray” (2.0 mm)

Products in the “Durex Architectural Coatings FX Series” are ready-mix, factory-tinted, polymer-based finish coats supplied in 30-kg pails. The finish coats provide a texture that is determined by the aggregate size, as well as the trowel motion used to render the wall surface. The following represents the different textures offered and their respective coating thickness:

- “Graffiato FX” (2.0 mm)
- “Marble Coat FX” (1.5 mm)
- “Sandex FX” (1.25 mm)
- “Stucco Spray FX” (1.25 mm)
- “Super Stipple FX” (1.0 mm)
- “Marble Coat” (1.0 mm)
- “Marble Coat FX (1.8 mm)
- “Venician FX” (2.0 mm)
- “Pebble Float FX” (1.5 mm)
- “Trim Spray FX” (2.0 mm)

Products in the “Durex New Generation Series” are ready-mix, factory-tinted, polymer-based finish coats supplied in 30-kg pails. The finish coats provide a texture that is governed by the aggregate size, as well as the trowel motion used to render the wall surface. The following represents the different textures offered:

- “Gemstone”
- “Cromatex”
- “Crystal Coat”
- “Stonetex”
- “Granite”
- “Century Stone”

Products in the “Durex Classic Finish Series” are ready mix, factory-tinted polymer-based finish coats supplied in 30-kg pails. The finish coats provide a texture that is governed by the aggregate size, as well as the trowel motion used to render the wall surface. The following represents the different textures offered:

- “Rasato”
- “Rustico”
- “Sandstone”
- “DecoGrain”

Table 2.0(a) "Durex Quantum" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Quantum	Quantum Select	Concrete, masonry, glass mat, cement board	Durex Flexcrete Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex Ectoflex Durex AirStop	Durex Barrier Seal Tape + Durex Joint Guard, Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Quantum Select EPS Type 1 (GDDC) Durex Quantum Select EPS Type 2 (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase Durex Flexcrete	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
		Plywood/ OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100							
	Quantum Select 5.0	Concrete, masonry, glass mat, cement board	Durex Flexcrete Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex Ectoflex Durex AirStop	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Quantum Select 5.0 EPS Type 3 (GDDC) Durex Quantum Select 5.0 EPS Type 1 Graphite (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase Durex Flexcrete	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
		Plywood/ OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100							

Table 2.0(a) "Durex Quantum" Components (cont.)

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Quantum (cont.)	Durex Quantum Select MF	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexseal	n/a	Durex Mechanical Fasteners	Durex Quantum Select EPS Type 1 (GDDC) Durex Quantum Select EPS Type 2 (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase Durex Flexcrete	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane
	Durex Quantum Select ICF	ICF	Durex Flexcrete Durex Ectoflex	n/a	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Quantum Select EPS Type 1 (GDDC) Durex Quantum Select EPS Type 2 (GDDC)	Durex Uniplast + Acrybond S Durex Monobase Durex Flexcrete	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape

Table 2.0(b) "Durex Insulite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Insulite	Durex Insulite EW-17	Concrete, masonry, glass mat, cement board	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	EPS Type 1 EPS Type 2	Durex Uniplast + Durex Acrybond S Durex Flexcrete Durex Monobase	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
			Durex Green Guard							
			Durex Blue Shield							
			Durex Dur-A-Mastic 100							
			Durex Ectoflex							
		Plywood / OSB	Durex AirStop	Durex Barrier Seam Tape + Durex Green Guard	Durex Green Guard	Durex Blue Shield	Durex Dur-A-Mastic 100			
			Durex Green Guard							
			Durex Blue Shield							
			Durex Dur-A-Mastic 100							
			Durex Dur-A-Mastic 100							

Table 2.0(b) "Durex Insulite" Components (cont.)

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Insulite	Durex Insulite EXT ADH	Concrete, masonry, glass mat, cement board	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	XPS Type 4	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
			Durex Green Guard		Durex Monobase		Durex Flexcrete		Durex Architectural Coatings FX	
			Durex Blue Shield	Durex Barrier Seam Tape + Durex Green Guard	Durex VCA 3.0		Durex Flexcrete		Durex Classic Series Coatings	
			Durex Dur-A-Mastic 100				Durex Monobase		Durex New Generation Series Coatings	
			Durex Ectoflex							
			Durex AirStop							
	Durex Insulite Select	Concrete, masonry, glass mat, cement board	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	Insulite EPS Type 1 Graphite (GDDC) Insulite EPS Type 2 Graphite (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
			Durex Green Guard		Durex Monobase		Durex Flexcrete		Durex Architectural Coatings FX	
			Durex Blue Shield	Durex Barrier Seam Tape + Durex Green Guard	Durex VCA 3.0		Durex Flexcrete		Durex Classic Series Coatings	
			Durex Dur-A-Mastic 100				Durex Monobase		Durex New Generation Series Coatings	
Durex Ectoflex										
Durex AirStop										
Durex Insulite Select MF	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexseal Membrane	n/a	Durex Mechanical Fasteners	Insulite EPS Type 1 Graphite (GDDC) Insulite EPS Type 2 Graphite (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane	
						Durex Flexcrete		Durex Architectural Coatings FX		
						Durex Monobase		Durex Classic Series Coatings		
								Durex New Generation Series Coatings		

Table 2.0(c) "Durex Flexlite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Flexlite	Flexlite ADH	Concrete, masonry, glass mat, cement board	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	EPS Type 1 EPS Type 2	Durex Flexcrete Durex Monobase	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
			Durex Green Guard						Durex Dur-A-Mastic 100	
		Plywood/ OSB	Durex Blue Shield	Durex Barrier Seam Tape + Durex Green Guard	Durex VCA 3.0		Durex Uniplast + Durex Acrybond S		Durex New Generation Series Coatings	
			Durex Dur-A-Mastic 100							
	Flexlite MF	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexseal	NA	Durex Mechanical Fasteners	EPS Type 1 EPS Type 2	Durex Flexcrete Durex Monobase Durex Uniplast + Durex Acrybond S	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane

Table 2.0(c) "Durex Flexlite" Components (cont.)

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Flexlite	Flexlite Select	Concrete, masonry, glass mat, cement board	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	Flexlite EPS Type 1 (GDDC)	Durex Flexcrete	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape
			Durex Green Guard						Durex Architectural Coatings FX	
			Durex Blue Shield						Durex Classic Series Coatings	
			Durex Dur-A-Mastic 100						Durex New Generation Series Coatings	
			Durex Ectoflex							
			Durex AirStop							
	Plywood/ OSB	Durex Green Guard								
		Durex Blue Shield								
		Durex Dur-A-Mastic 100								
Flexlite Select MF	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	Flexlite EPS Type 1 (GDDC)	Durex Flexcrete	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape	
		Durex Green Guard						Durex Architectural Coatings FX		
		Durex Blue Shield						Durex Classic Series Coatings		
		Durex Dur-A-Mastic 100						Durex New Generation Series Coatings		
		Durex Ectoflex								
		Durex AirStop								

Table 2.0(d) "Durex Equalite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Equalite	Durex Equalite	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flex Seal Membrane	n/a	Durex Mechanical Fasteners	Durex Equalite MW Insulation	Durex Uniplast + Durex Acrybond S Durex Monobase NC	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane
	Durex Equalite Select	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex FlexSeal Membrane	n/a	Durex Mechanical Fasteners	Durex Equalite Select MW Insulation (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase NC	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane

Table 2.0(e) "Durex IBS Panel" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex IBS Panel	Durex Integrated Building System	Glass mat, cement board, plywood/ OSB	Durex Green Guard	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	Durex Quantum Select EPS Type 1 (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape
			Durex Blue Shield	Durex Barrier Seam Tape + Durex Green Guard	Durex Monobase	Durex Quantum Select EPS Type 2 (GDDC)			Durex Architectural Coatings FX	
			Durex Dur-A-Mastic 100		Durex VCA 3.0	Durex Quantum Select EPS Type 1 Graphite (GDDC)			Durex Classic Series Coatings	
						Durex Quantum Select 5.0 EPS Type 3 (GDDC)			Durex New Generation Series Coatings	

Table 2.0(e) "Durex IBS Panel" Components (cont.)

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex IBS Panel	Durex Integrated Cladding System	Glass mat, cement board, plywood/ OSB	Durex Green Guard	Durex Barrier Seal Tape + Durex Joint Guard	Durex Flexcrete	Durex Quantum Select EPS Type 1 (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape
			Durex Blue Shield	Durex Barrier Seam Tape + Durex Green Guard	Durex Monobase	Durex Quantum Select EPS Type 2 (GDDC)			Durex Architectural Coatings FX	
			Durex Dur-A-Mastic 100		Durex VCA 3.0	Durex Quantum Select EPS Type 1 Graphite (GDDC)			Durex Classic Series Coatings	
						Durex Quantum Select 5.0 EPS Type 3 (GDDC)			Durex New Generation Series Coatings	

Table 2.0(f) "Durex Panelite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Panelite	Durex Panelite	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flex Seal	Durex Flex Seal	Durex Mechanical Fasteners	Durex Quantum Select EPS (GDDC) with internal Steel Reinforcement	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane
	Durex Panelite ADH	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexcrete Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex Ectoflex Durex AirStop	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Quantum Select EPS (GDDC) with internal Steel Reinforcement	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape

Table 2.0(g) "Durex Cladlite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Cladlite	Durex Cladlite	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flex Seal	Durex Flex Seal	Durex Mechanical Fasteners	Durex Flexlite Select EPS (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane
	Durex Cladlite ADH	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flexcrete Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex Ectoflex Durex AirStop	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Flexlite Select EPS (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings Durex Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape

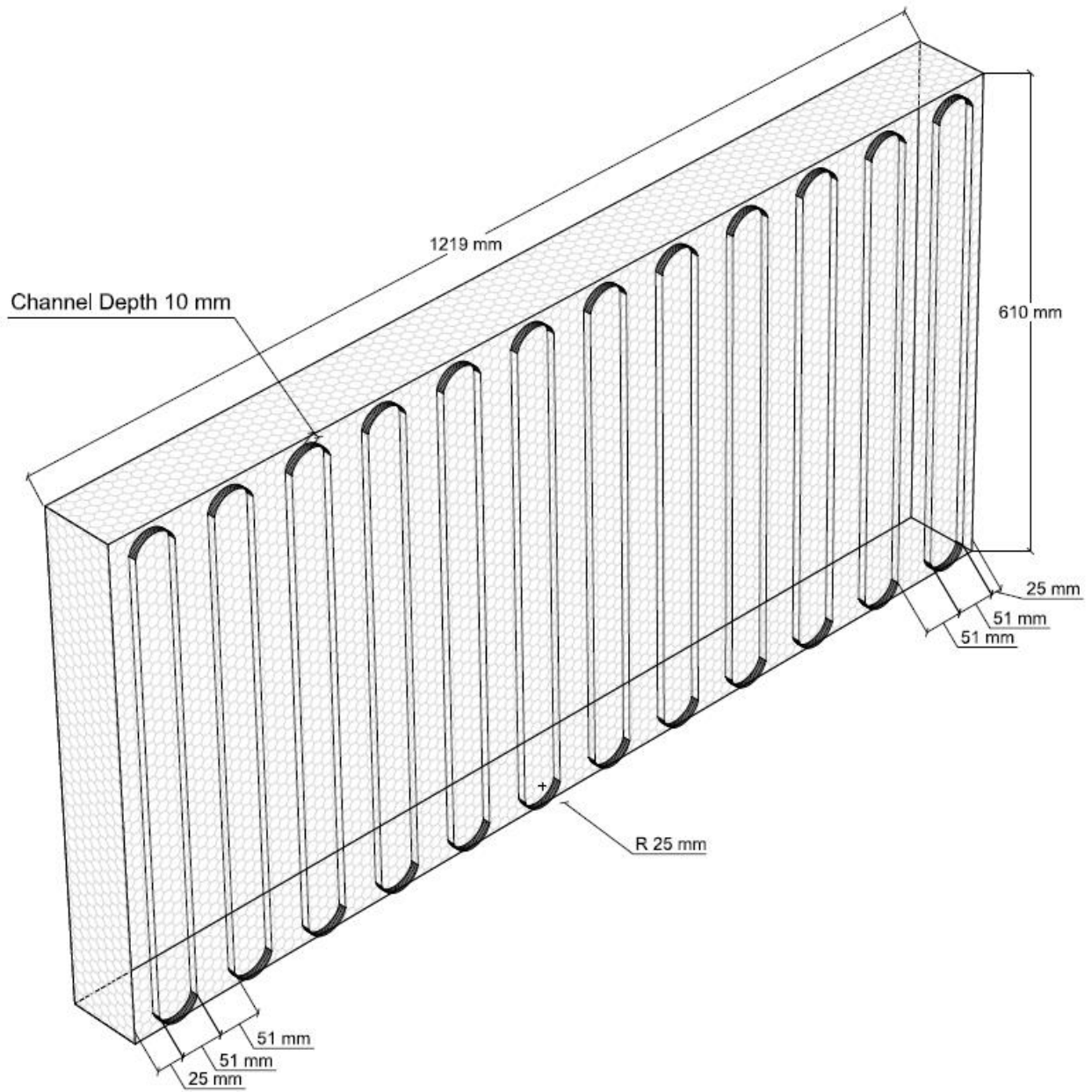


Figure 1. “Durex Quantum Select EPS” and “Durex Quantum Select 5.0 EPS” insulation drainage board

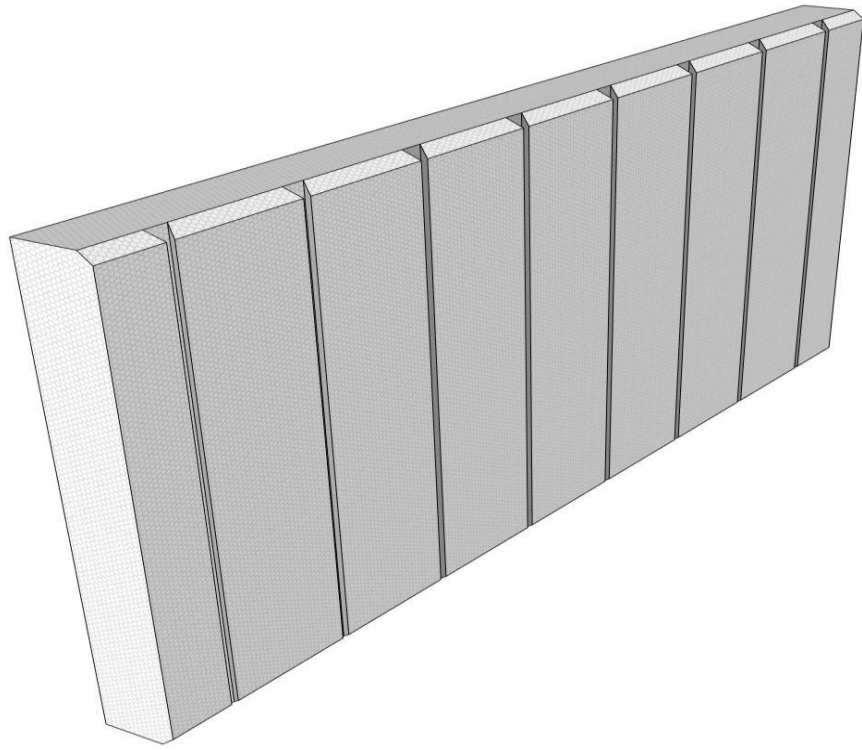


Figure 2. “Durex Flexlite Select EPS” Board (GDDC) and “Durex Insulite Select Graphite EPS” Board (GDDC) (side view)

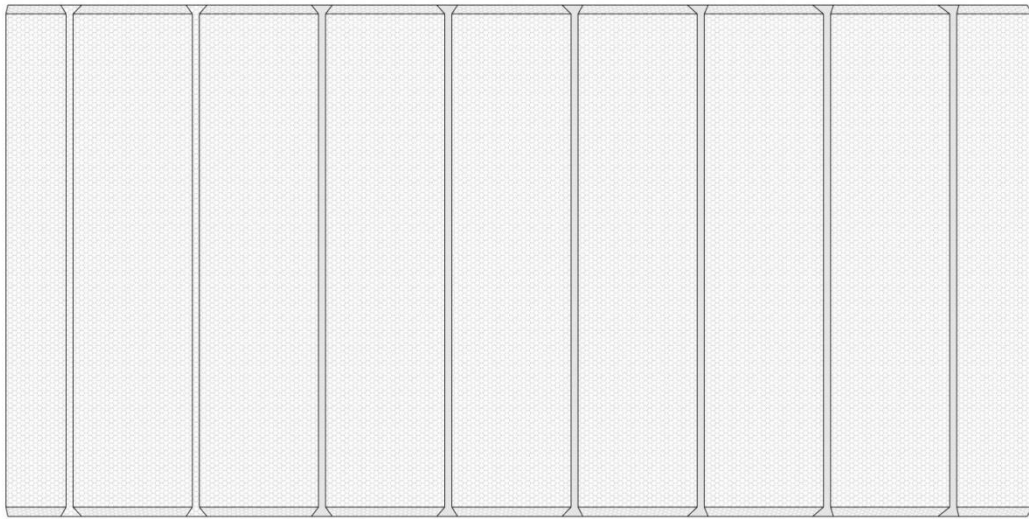


Figure 3. “Durex Flexlite Select EPS” Board (GDDC) and “Durex Insulite Select Graphite EPS” Board (GDDC) (front view)

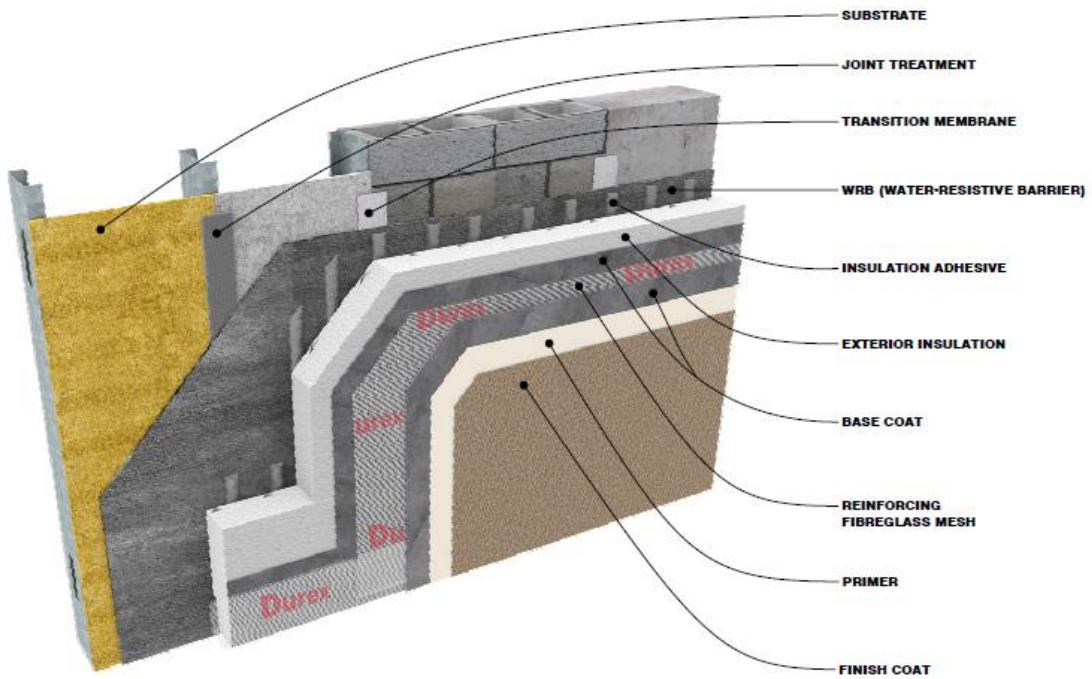


Figure 4. “Durex Quantum Select” over non-wood applications

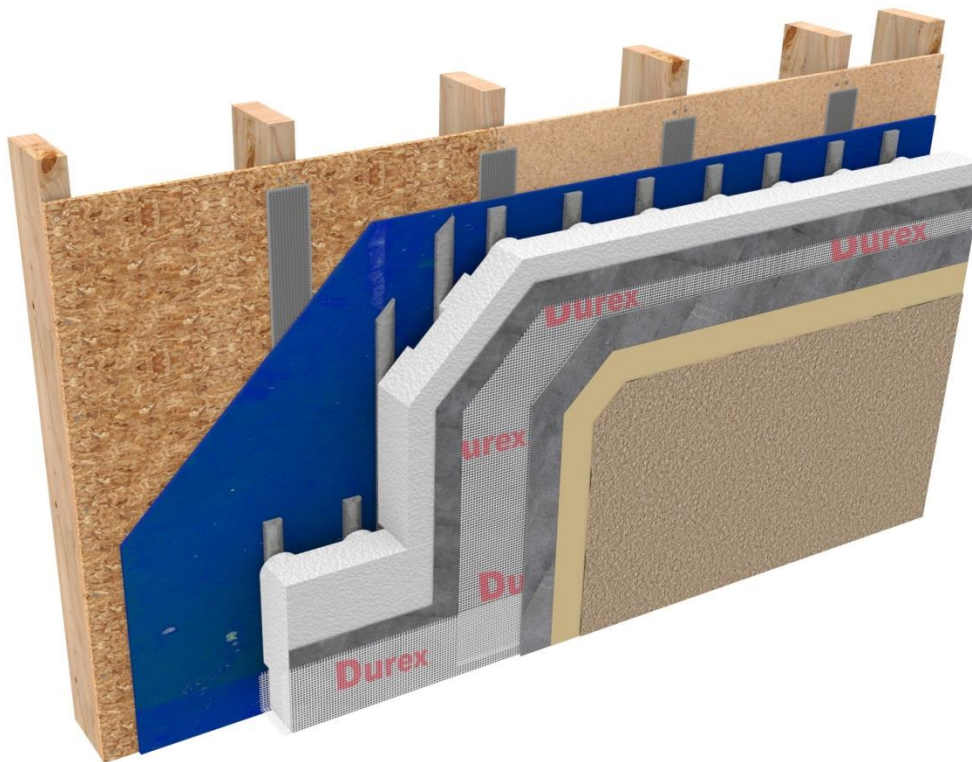


Figure 5. “Durex Quantum Select” over wood applications

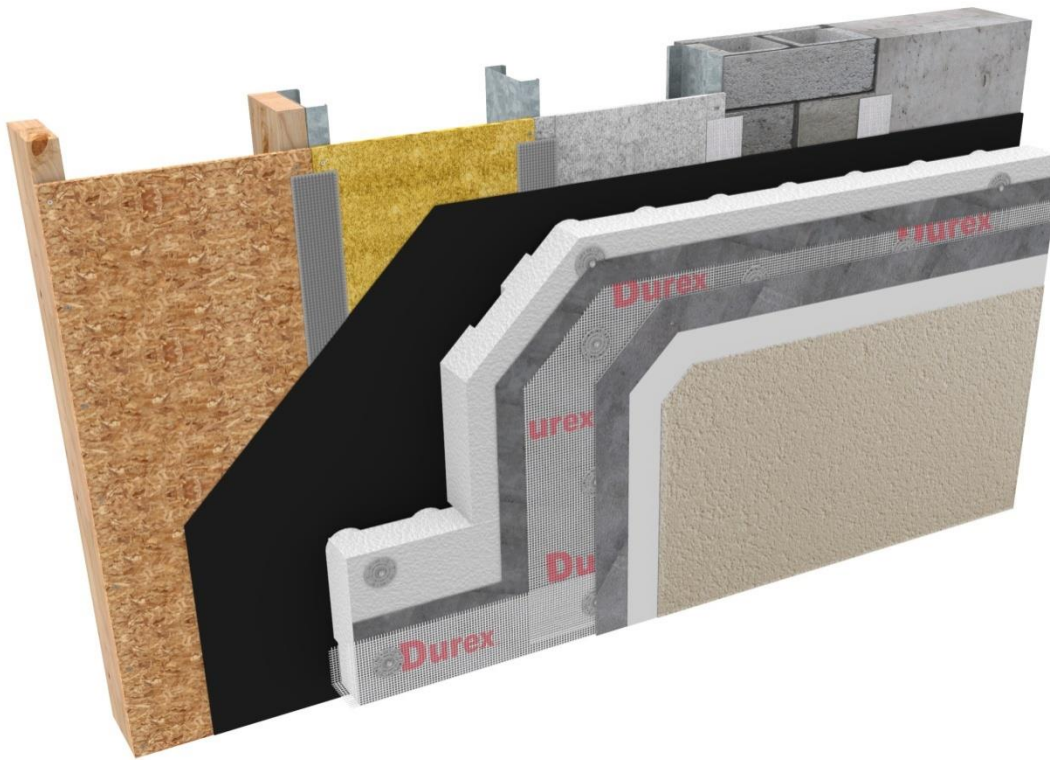


Figure 6. “Durex Quantum Select MF” over different substrate applications

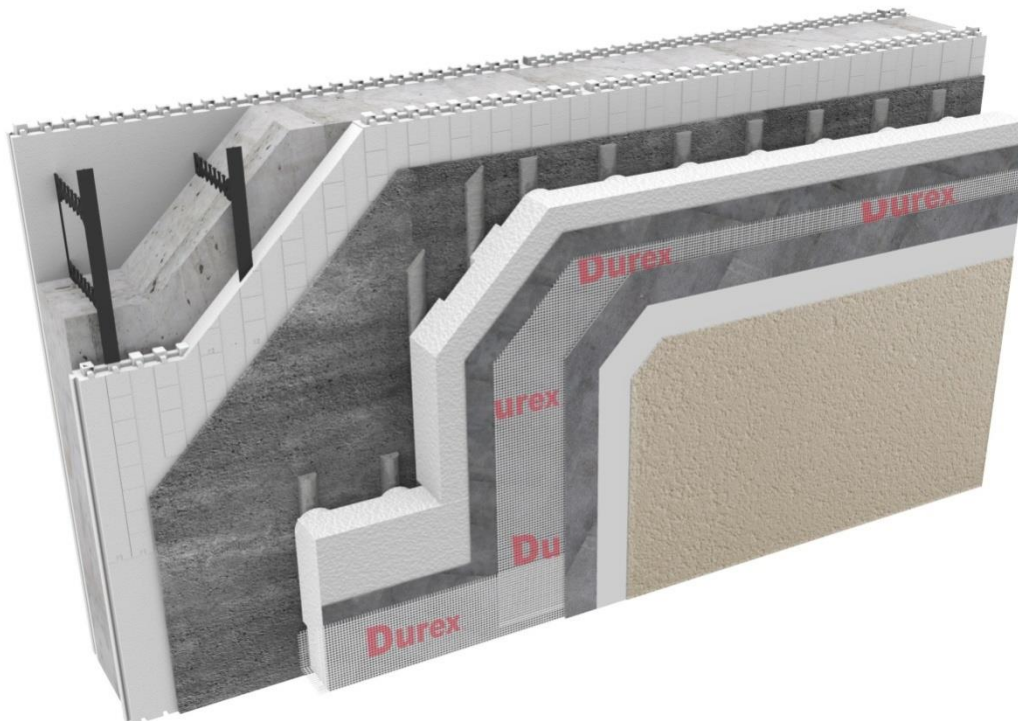


Figure 7. “Durex Quantum Select ICF” applications over insulated concrete forms

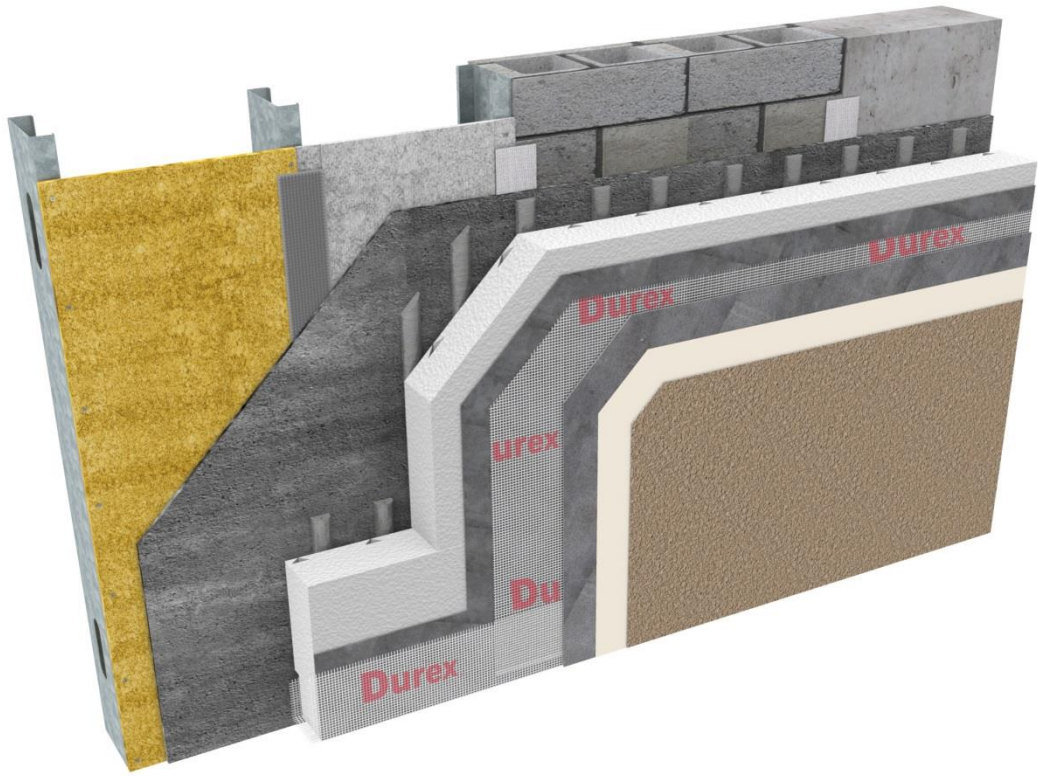


Figure 8. "Durex Flexlite Select" over non-wood applications

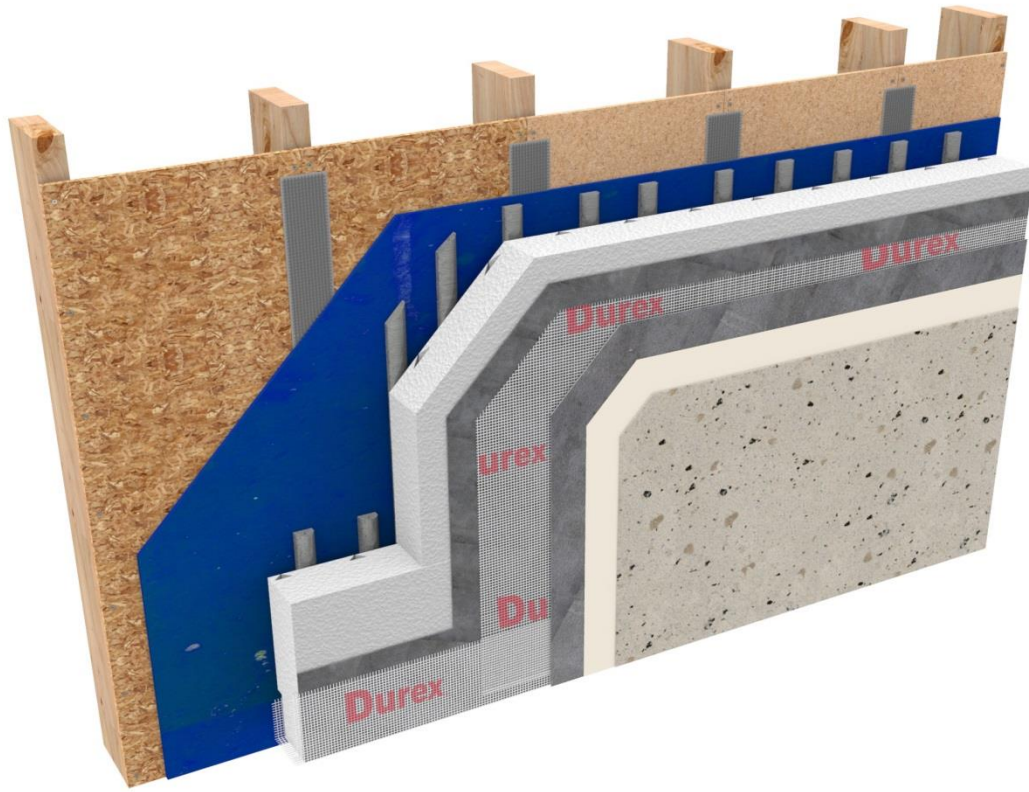


Figure 9. "Durex Flexlite Select" over wood applications

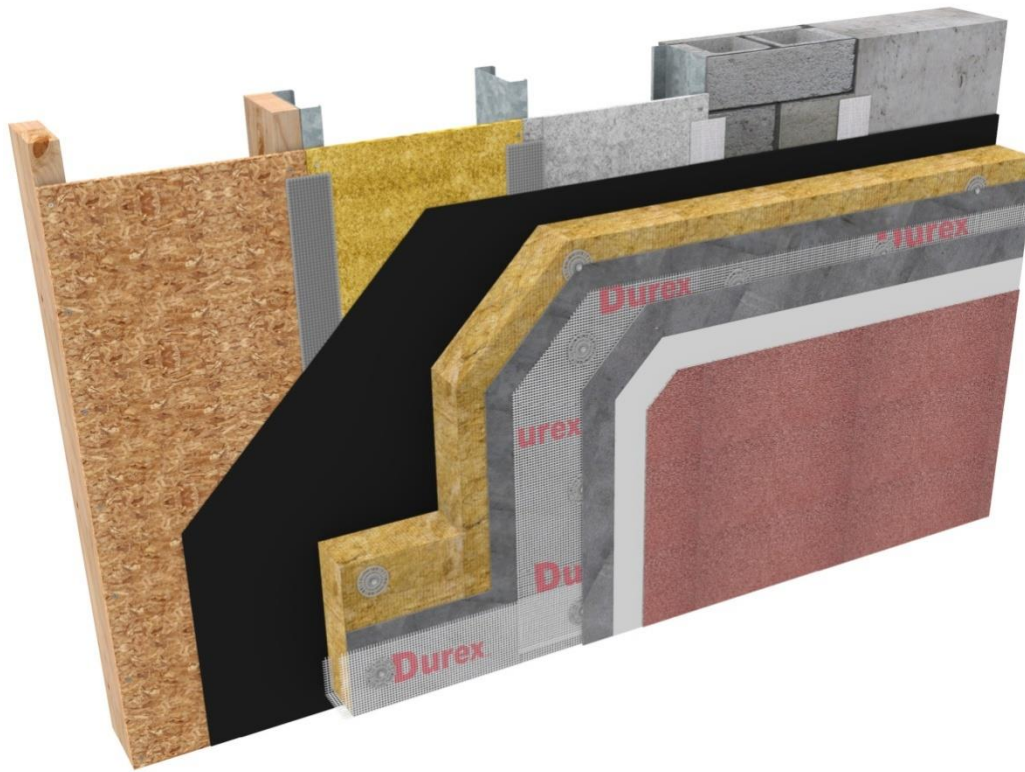


Figure 10. “Durex Equalite” over different substrate applications

3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the “Durex Flexlite/Durex Insulite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite” being used in accordance with the conditions and limitations set out below.

- The products are intended for use as exterior insulation and finish systems (EIFS) applied directly to vertical walls of brick, masonry, monolithic concrete walls, and/or cementitious, glass-mat-surfaced gypsum, plywood or OSB sheathing boards installed over wood or steel framing.
- Gaps between the sheathing boards of framed walls shall not exceed 3.0 mm.
- The products are acceptable for use on new and existing exterior, vertical walls. The systems are not acceptable for use on horizontal surfaces. (Note: The present limitation doesn't include protected soffit applications.)
- When the products are part of a prefabricated panel system that incorporates structural components, the prefabricated panel system shall be designed by a professional engineer or architect in accordance with the manufacturer's criteria and the requirements of the NBC 2010 and 2015.
- “Durex IBS/Durex Panelite/Durex Cladlite” prefabricated systems shall have their structural components and attachment system designed by a licensed professional engineer.
- The products are not suitable for use as a structural sheathing for bracing purposes.
- The products are not intended for use as below-grade insulation and should terminate at least 200 mm above grade level.
- When used in coastal areas on residential occupancies that fall under the scope of Part 9 of Division B of the NBC 2015, the products must be installed in conjunction with a capillary break conforming to Clause 9.27.2.2.(1)(e), Minimum Protection from Precipitation Ingress, of Division B of the NBC 2015. Coastal areas are defined in Sentence 9.27.2.2.(5) of Division B of the NBC 2015.
- When used in non-coastal areas on residential occupancies that fall under the scope of Part 9 of Division B of the NBC 2015, the products must be installed in accordance with Article 9.27.13.1, Application, of Division B of the NBC 2015.
- WRBs that are coatings must be applied in two coats.
- The continuity of the second plane of protection across joints and junctions at openings, penetrations and expansion joints must be maintained through accessories such as self-adhering membranes, tapes, etc. as specified by the manufacturer, prior to the installation of the systems.
- The use of the products is limited to geographical areas where the wind design value is $Q_{50} < 1.0$ kPa.

- The possibility of moisture accumulation within the wall construction is mainly a function of: 1) the ability of the wall assembly to deflect bulk water entry, 2) the physical properties of the cladding being installed and its impact on the thermal, air leakage and vapour diffusion characteristics of the existing wall, all of which must be in accordance with Appendix Note A-5.1.2.1.(1), Application (Environmental Separation), of Division B of the NBC 2015.
- When used in new construction, the design of the inboard/outboard insulation must be in accordance with the requirements of Section 9.25., Heat Transfer, Air Leakage and Condensation Control, of Division B of the NBC 2015.
- In retrofit construction, adding thermal insulation to existing exterior walls will increase the thermal efficiency and airtightness of the wall. Deficiencies in flashing and other elements in the building assembly, including mechanical systems, may result in the detrimental effects of moisture accumulation highlighted in Appendix Note A-9.25.2.4.(3), Loose-Fill Insulation in Existing Wood-Frame Walls, of Division B of the NBC 2015. As a result, existing exterior walls intended to be retrofitted with EIFS must meet the requirements of the NBC 2015 for heat transfer, air leakage and condensation control.
- The products can provide additional thermal insulation to the wall assembly in retrofit construction with no detrimental effects if properly installed with knowledge of the existing wall configuration and performance.
- The products alone may not provide the full amount of the required wall insulation. The thermal resistance of the wall system must conform to the condensation resistance and energy requirements of the applicable building code. The wall system may have to conform to the National Energy Code for Buildings 2015 at minimum to meet Canada Mortgage and Housing Corporation (CMHC) technical requirements.
- The polystyrene thermal insulation must be in conformance with the requirements of CAN/ULC-S701.
- The polystyrene thermal insulation boards must be cut from moulded blocks manufactured using 100% virgin raw materials.
- The EPS Graphite is limited to products manufactured by PLASTI-FAB LTD and falling under a recognized certification program to CAN/ULC-S701.
- The polystyrene thermal insulation boards must be in conformance with the dimensional tolerances specified in Section B2.2 of CAN/ULC-S701.1-17, “Thermal Insulation, Polystyrene Boards” (formerly CAN/ULC-S701).
- Before cutting into insulation boards that would be used in EIFS applications, the polystyrene thermal insulation blocks must be aged in conformance with Section B2.2 of CAN/ULC-S701.1-17.
- The polystyrene thermal insulation boards must have a flame-spread rating of not more than 500 when tested in accordance with the requirements of CAN/ULC-S102.2-10, “Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.”
- Where allowed by the Code through conformance to Article 3.1.5.5. of Division B of the NBC 2015, the “Durex Quantum Select” system having:
 - “Durex Green Guard” as the WRB;
 - “Durex Flexcrete” as the adhesive;
 - “Durex Quantum Select EPS” insulation board, EPS Type 1 or Type 2, up to 152 mm thick;
 - “Durex Flexcrete” or “Durex Uniplast Acrybond S” as the base coat;
 - “Durex Architectural Coatings” as the finish coat;
 - “Durex Standard Mesh” having a minimum weight of:
 - 142.5 g/m² and 125-mm mesh overlap when using 152-mm-thick insulation, and
 - 100-mm mesh overlap when using lesser thicknesses
- is acceptable for use in buildings required to be of noncombustible construction that are not more than three storeys in height if not sprinklered, and an unlimited number of storeys in height if sprinklered. For a detailed description of the compliance of the related systems to the requirements of Article 3.1.5.5. of Division B of the NBC 2015, refer to Intertek Listing Information of Quantum Select, SPEC ID: DPL-WEIFS 30-01, and Intertek Report Number 100432565COQ-004a, Revised date January 29, 2013.
- Where allowed by the Code through conformance to Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, “Durex Flexlite Select/Durex Quantum Select/Durex Quantum Select ICF/Durex Insulite EW-17/Durex Insulite Select/Durex Flexlite ADH” are acceptable for use in the exposed face of buildings required to be of non-combustible construction, provided the interior surfaces of the wall assembly are protected by a thermal barrier conforming to Article 3.1.5.15. of Division B of the NBC 2015. For a detailed description of the compliance of “Durex Flexlite Select/Durex Quantum Select/Durex Insulite EW-17/Durex Insulite Select/Durex Flexlite ADH” to the requirements of Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, refer to ULC Listings, ULC FWFOC.EW17, ULC FWFOC.EW21 and ULC FWFOC.EW22, and Intertek report 12737641COQ-001 for further details on the combination of coatings/systems falling under the scope of said listings.
- When used in noncombustible construction, the polystyrene insulation shall be protected from the inside of the building in accordance with the applicable sentences of Article 3.1.5.15. of Division B of the NBC 2015.
- When used in combustible construction, the polystyrene insulation must be protected from the inside of the building in accordance with Clauses 3.1.4.2.(1)(c), Protection of Foamed Plastics, and 9.10.17.10.(1)(c), Protection of Foamed Plastics, of Division B of the NBC 2015.
- The systems should be kept at least 50 mm, or as required in building regulations and safety codes, from heat-emitting devices, such as recessed light fixtures and chimneys.
- The requirements of the NBC 2015 regarding fire blocks shall be implemented.

- Expansion/movement joints must be carried through the cladding. The joints are required to accommodate expansion and contraction of building materials due to thermal changes, moisture, wind, gravity, vibration and seismic activity. Expansion/movement joints in the cladding must be used in the following situations:
 - at joints that occur in the substrate;
 - at any abutment of the system with other materials;
 - where changes in the substrate may create deflection or movement;
 - where significant structural movement occurs;
 - where deflections in excess of $L/240$ are expected; and
 - at the floor line in wood-frame construction, which may not be required where fully engineered framing and floor systems are used.
- Closed-cell backer rods should be used at expansion/movement joints so that the low modulus sealant may be installed as per the sealant manufacturer's instructions.
- The product must be installed according to the manufacturer's installation manual by a trained applicator authorized by the manufacturer.
- When "Durex Green Guard," "Durex Blue Shield" or "Durex Dur-A-Mastic 100" are used in conjunction with panel-type substrates, the joints between the different panels must be treated with "Durex Green Guard," "Durex Blue Shield" or "Durex Joint Guard" in combination with "Barrier Seam Tape" prior to the installation of said WRBs.
- For wood substrate applications, "Durex Green Guard," "Durex Blue Shield" or "Durex Joint Guard" are trowel applied into panel joints in combination with "Barrier Seam Tape" prior to the application over the field of the wall and/or prior to the application of "Durex Green Guard," "Durex Blue Shield" or "Durex Dur-A-Mastic 100."
- "Durex Green Guard," "Durex Blue Shield" or "Durex Dur-A-Mastic 100" are intended to be used in conjunction with one coat of "Durex Flexcrete," "Durex Monobase" or "Durex VCA 3.0" when used over wood substrates and "Durex Green Guard," "Durex Blue Shield," "Durex Dur-A-Mastic 100," "Durex AirStop" or "Durex Flexcrete" in conjunction with "Durex Flexcrete," "Durex Monobase" or "Durex VCA 3.0" when used on all substrate applications other than wood.
- Wet materials must be applied at temperatures above 4°C and maintained above 4°C for a period not less than 24 hours. The substrate must be maintained above 4°C for a period not less than 24 hours. Cool and humid climatic conditions may extend drying time beyond 24 hours. Temporary protection and heat must be provided during colder conditions. Materials must be stored at temperatures between 5°C and 32°C. Previously frozen materials must not be used.
- Wet finished surfaces must be protected from rain and wind-driven moisture until the materials have set and hardened.
- The product must be installed with suitable flashing to drain any incidental water from the drainage cavity to the exterior and to protect the exposed top edge of the cladding. Cap flashing must be installed immediately after completion of the finish coat or temporary protection must be provided.
- Glass mat gypsum sheathing must be in compliance with the requirements of ASTM C 1177/C1177M-13, "Glass Mat Gypsum Substrate for Use as Sheathing," or have been evaluated by the CCMC.
- Specification of surface sealers must be provided by the manufacturer.
- OSB and/or plywood sheathing boards used in conjunction with the products must comply with the requirements of CSA O86-14 "Engineering Design in Wood." In addition, the OSB must comply with CSA O325-07, "Construction Sheathing," while plywood must comply with CSA O121-08, "Douglas Fir Plywood," CSA O151-09, "Canadian Softwood Plywood" and CSA O153-13, "Poplar Plywood."
- The OSB and/or plywood sheathing boards must have a minimum thickness of 11.1 mm and 12.7 mm, respectively. The boards must have their principal strength direction across the studs, must be continuously supported by framing and must be gapped at least 2.0 mm and not more than 3.0 mm.
- OSB and/or plywood sheathing boards used in conjunction with the product must be fastened to the framing in conformance with Article 9.23.3.5., Fasteners for Sheathing or Subflooring, of Division B of the NBC 2015.
- The product that is intended for use over wood must have the moisture content of lumber and/or wood sheathing not greater than 19% at the time of the application of the WRB.
- The drained air space (geometrically defined and/or by notched trowel) must remain unobstructed so as to form a clear drainage cavity behind the insulation boards. Additionally, it must terminate in such a way as not to obstruct the dissipation of incidental rainwater to the exterior.
- The drained air space (geometrically defined and /or by notched trowel) shall remain unobstructed so as to form a clear drainage cavity behind the insulation boards and it shall terminate in such a way as not to obstruct the dissipation of incidental rainwater to the exterior. When using notched-trowel adhesive ribbons as the drainage mechanism, the application of the ribbons shall be conducted in a way as to form clear and parallel drainage paths behind the insulation boards and to avoid the creation of any V grooves. ("V grooves" refer to ribbons touching and closing the drainage path.) The ribbons must be a minimum of 9.0 mm deep, 9.0 mm wide and 38 mm apart.

4. Technical Evidence

CCMC's Technical Guide for “Durex Flexlite/Durex Insulite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite” sets out the nature of the technical evidence required by CCMC to enable it to evaluate a product as an acceptable or alternative solution in compliance with the NBC 2015. The Report Holder has submitted test results for CCMC's evaluation. Testing was conducted at independent laboratories recognized by CCMC. The corresponding test results for “Durex Flexlite/Durex Insulite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite” are summarized below.

4.1 NBC 2015 Compliance Data for “Durex Flexlite/Durex Insulite/Durex Quantum, Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite” on which CCMC Based its Opinion in Section 1

4.1.1 Performance Requirements

Table 4.1.1.1 Results of Testing of Ash Content

Property		Unit	Requirement	Result
Ash content	Adhesive	Durex Monobase	Report value	90.8
	Adhesive	Durex VCA 3.0		63.2
	Base coat	Durex Acrybond S		0.5
	Base coat	Durex Uniplast		97.5
	Finish coat	Durex Architectural Coatings		79.6
	WRB	Durex AirStop		31.3
	WRB	Durex Blue Shield		9.9
	WRB	Durex Dur-A-Mastic 100		38.0

Table 4.1.1.1 Results of Testing of Ash Content (cont.)

Property		Unit	Requirement	Result
Ash content	WRB	Durex Ectoflex	Report value	0.2
	WRB	Durex Ectoflex B		98.5
	WRB	Durex Flexcrete		71.5
	WRB	Durex Flexcrete B		98.5
	WRB	Durex Green Guard		9.9

Table 4.1.1.2 Results of Infrared Analysis Testing

Property			Requirement	Result
Infrared analysis	Adhesive	Durex Monobase	Report value	Report on file
		Durex VCA 3.0		
	Base coat	Durex Acrybond S		
		Durex Uniplast		
	Finish coat ¹	Durex Architectural Coatings ⁽¹⁾		
	WRB	Durex AirStop		
		Durex Blue Shield		
		Durex Dur-A-Mastic 100		
		Durex Ectoflex		
		Durex Ectoflex B		
		Durex Flexcrete		
		Durex Flexcrete B		
Durex Green Guard				

Note to Tables 4.1.1.1 and 4.1.1.2:

1. “Finish coat” refers to “Durex Architectural Coatings,” “Durex Architectural Coatings FX,” “Durex New Generation Series Coatings,” and “Durex Classic Finish Series.”

Table 4.1.1.3 Results of Testing of Adhesion of WRB to Substrates other than Plywood/OSB

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Flexcrete to cement board	dry state	MPa	0.25	-
		2-h drying		0.08	0.51
		7-d drying		0.25	0.65
	Durex Flexcrete to glass mat gypsum	dry state		0.25	-
		2-h drying		0.08	0.13
		7-d drying		0.25	0.38
	Durex Green Guard/ Durex Blue Shield to concrete	dry state		0.25	0.53
		2-h drying		0.08	0.55
		7-d drying		0.25	0.67
	Durex Green Guard/ Durex Blue Shield to glass mat gypsum	dry state		0.25	0.53
		2-h drying		0.08	0.55
		7-d drying		0.25	0.67
	Durex Ectoflex to concrete	dry state		0.25	1.65
		2-h drying		0.08	0.87
		7-d drying		0.25	1.63
	Durex Ectoflex to cement board	dry state		0.25	0.58
		2-h drying		0.08	0.20
		7-d drying		0.25	0.50
	Durex Ectoflex to glass mat gypsum	dry state		0.25	0.32
		2-h drying		0.08	0.12
		7-d drying		0.25	0.31
	Durex AirStop to cement board	dry state		0.25	0.55
		2-h drying		0.08	0.31
		7-d drying		0.25	0.38
	Durex AirStop to concrete	dry state		0.25	1.85
		2-h drying		0.08	1.30
		7-d drying		0.25	1.33
	Durex AirStop to glass mat gypsum	dry state		0.25	0.44
		2-h drying		0.08	0.19
		7-d drying		0.25	0.30
Durex Dur-A-Mastic 100 to cement board	dry state	0.25	0.49		
	2-h drying	0.08	0.22		
	7-d drying	0.25	0.35		
Durex Dur-A-Mastic 100 to concrete	dry state	0.25	1.70		
	2-h drying	0.08	0.72		
	7-d drying	0.25	1.07		

Table 4.1.1.3 Results of Testing of Adhesion of WRB to Substrates other than Plywood/OSB (cont.)

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Dur-A-Mastic 100 to glass mat gypsum	dry state	MPa	0.25	0.43
		2-h drying		0.08	0.23
		7-d drying		0.25	0.27

Table 4.1.1.4 Results of Testing of Adhesion Bond of Adhesive to WRB

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Flexcrete to Durex Flexcrete	dry state	MPa	0.25	1.18
		2-h drying		0.08	1.11
		7-d drying		0.25	1.12
	Durex Flexcrete to Durex Green Guard	dry state		0.25	1.28
		2-h drying		0.08	0.82
		7-d drying		0.25	1.02
	Durex Flexcrete to Durex Dur-A-Mastic 100	dry state		0.25	1.21
		2-h drying		0.08	0.86
		7-d drying		0.25	0.82
	Durex Flexcrete to Durex AirStop	dry state		0.25	1.29
		2-h drying		0.08	1.05
		7-d drying		0.25	1.05
	Durex Flexcrete to Durex Ectoflex	dry state		0.25	1.25
		2-h drying		0.08	0.76
		7-d drying		0.25	1.30
	Durex Monobase to Durex Green Guard/ Durex Blue Shield	dry state		0.25	1.55
		2-h drying		0.08	1.06
		7-d drying		0.25	1.48
	Durex Monobase to Durex Ectoflex	dry state		0.25	1.38
		2-h drying		0.08	0.64
		7-d drying		0.25	1.38
	Durex Monobase to Durex Flexcrete	dry state		0.25	1.26
		2-h drying		0.08	0.84
		7-d drying		0.25	1.13

Table 4.1.1.4 Results of Testing of Adhesion Bond of Adhesive to WRB (cont.)

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Monobase to Durex Dur-A-Mastic 100	dry state	MPa	0.25	1.11
		2-h drying		0.08	0.80
		7-d drying		0.25	1.12
	Durex Monobase to Durex AirStop	dry state		0.25	1.59
		2-h drying		0.08	1.01
		7-d drying		0.25	1.03

Table 4.1.1.5 Results of Testing of Adhesion Bond of Adhesive to Insulation

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Flexcrete to EPS Type 1	dry state	MPa	0.08	0.31
		2-h drying		0.08	0.27
		7-d drying		0.08	0.28
	Durex Flexcrete to EPS Type 3	dry state		0.08	0.49
		2-h drying		0.08	0.32
		7-d drying		0.08	0.47
	Durex Flexcrete to EPS Graphite	dry state		0.08	0.11
		2-h drying		0.08	0.09
		7-d drying		0.08	0.10
	Durex VCA 3.0 to EPS Type 1	dry state		0.08	0.31
		2-h drying		0.08	0.27
		7-d drying		0.08	0.28
	Durex VCA 3.0 to EPS Type 3	dry state		0.08	0.49
		2-h drying		0.08	0.32
		7-d drying		0.08	0.47
	Durex VCA 3.0 to EPS Graphite	dry state		0.08	0.11
		2-h drying		0.08	0.09
		7-d drying		0.08	0.10
	Durex Monobase to EPS Type 1	dry state		0.08	0.30
		2-h drying		0.08	0.25
		7-d drying		0.08	0.31
	Durex Monobase to EPS Type 3	dry state		0.08	0.32
		2-h drying		0.08	0.20
		7-d drying		0.08	0.32
	Durex Monobase to EPS Graphite	dry state		0.08	0.09
		2-h drying		0.08	0.11
		7-d drying		0.08	0.10

Table 4.1.1.5 Results of Testing of Adhesion Bond of Adhesive to Insulation (cont.)

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Monobase to XPS	dry state	MPa	0.08	-
		2-h drying		0.08	0.24
		7-d drying		0.08	0.78

Table 4.1.1.6 Results of Testing of Lamina Bond Strength Tests (Base Coat/Finish Coat/Insulation)

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond	Durex Flexcrete/Durex Architectural Coatings Finish to EPS Type 1	dry state	MPa	0.08	0.37
		2-h drying		0.08	0.25
		7-d drying		0.08	0.38
	Durex Flexcrete/Durex Architectural Coatings Finish to EPS Type 3	dry state		0.08	0.75
		2-h drying		0.08	0.34
		7-d drying		0.08	0.38
	Durex Flexcrete/Durex Architectural Coatings Finish to EPS Graphite	dry state		0.08	0.13
		2-h drying		0.08	0.12
		7-d drying		0.08	0.11
	Durex Flexcrete/Durex Architectural Coatings Finish to concrete	dry state		0.08	1.98
		2-h drying		0.08	1.01
		7-d drying		0.08	1.19
	Durex Monobase/Durex Architectural Coatings Finish to concrete	dry state		0.08	1.17
		2-h drying		0.08	1.06
		7-d drying		0.08	1.16
	Durex Monobase/Durex Architectural Coatings Finish to EPS Type 1	dry state		0.08	0.37
		2-h drying		0.08	0.25
		7-d drying		0.08	0.38
	Durex Monobase/Durex Architectural Coatings Finish to EPS Graphite	dry state		0.08	0.10
		2-h drying		0.08	0.12
		7-d drying		0.08	0.10
	Durex Uniplast + Durex Acrybond S/Durex Architectural Coatings Finish to EPS Graphite	dry state		0.08	0.10
		2-h drying		0.08	0.10
		7-d drying		0.08	0.09
	Durex Monobase/Durex Architectural Coatings Finish to EPS Type 3	dry state		0.08	0.79
		2-h drying		0.08	0.37
		7-d drying		0.08	0.43
	Durex Uniplast/Durex Architectural Coatings Finish to concrete	dry state		0.08	1.28
		2-h drying		0.08	1.07
		7-d drying		0.08	1.09

Table 4.1.1.6 Results of Testing of Lamina Bond Strength Tests (Base Coat/Finish Coat/Insulation) (cont'd)

Property		Unit	Requirement No detachment at bonding plane @	Result
Durex Uniplast/Durex Architectural Coatings Finish to EPS Type 1	dry state		0.08	0.62
	2-h drying		0.08	0.51
	7-d drying		0.08	0.38
Durex Uniplast/Durex Architectural Coatings Finish to EPS Type 3	dry state		0.08	0.88
	2-h drying		0.08	0.44
	7-d drying		0.08	0.45

Table 4.1.1.7 Results of Testing of Water Vapour Transmission (WVT) of WRB

Property		Unit	Requirement	Result	
WVT of WRB	Durex Flexcrete	2.5 mm wet	ng/(Pa·s·m ²)	Report value	276
	Durex Green Guard	1 mm wet			48
		1.5 mm wet			11
	Durex Blue Shield	1 mm wet			48
		1.5 mm wet			11
	Durex Dur-A-Mastic 100	1.5 mm wet			248
		2.5 mm wet			216
	Durex Ectoflex	1.5 mm wet 1 coat			90
1.5 mm wet 2 coat		77			

Table 4.1.1.8 Results of Testing of Water Vapour Transmission (WVT) of Lamina

Property		Unit	Requirement	Result	
WVT of lamina	Base coat	Durex Flexcrete	ng/(Pa·s·m ²)	≥ WVP of EPS	276
	Base coat	Durex Flexcrete/EPS			65.77
	Base coat	Durex Uniplast/ Durex Architectural Coatings Finish			165
	Base coat	Durex Monobase/Durex Architectural Coatings Finish			149
	Finish coat	Durex Venician			387

Table 4.1.1.9 Results of Testing of Water Absorption of Base Coat

Property		Unit	Requirement	Result
Water absorption of base coat	Durex Flexcrete	%	≤ 20 of the dry weight	11.2
	Durex Monobase			15.85
	Durex Uniplast			10.7
	Durex Flexcrete/Durex Architectural Coatings Finish ¹			9.05
	Durex Monobase/Durex Architectural Coatings Finish ¹			14.2
	Durex Uniplast/Durex Architectural Coatings Finish ¹			9.75

Note to Table 4.1.1.9:

1. Extra information provided by the proponent

Table 4.1.1.10 Results of Testing of Water Absorption Coefficient of WRB at 72 Hours

Property			Unit	Requirement	Results	
Water absorption coefficient of WRB @ 72 hours of:	Durex Flexcrete		kg/(m ² ·s ^{1/2})	≤ 0.004	0.0007	
	Durex Green Guard				0.0001	
	Durex Blue Shield				0.0001	
	Durex Dur-A-Mastic 100				0.0006	
	Durex AirStop				0.0001	
	Durex Ectoflex @	0.75 mm				0.0006
		1.0 mm				0.0005
		1.5 mm				0.0005

Table 4.1.1.11. Results of Testing of Impermeability to Water of Base Coat

Property		Unit	Requirement	Results
Impermeability to water of base coat	Durex Flexcrete	h	No water penetration in less than 2 h	Pass
	Durex Monobase			Pass
	Durex Uniplast			Pass

Table 4.1.1.12 Results of Testing of Mildew and Fungus Resistance

Property		Unit	Requirement	Results
Mildew and fungus resistance	Finish Coat (Durex Architectural Coatings Finish)	No unit	No growth	Pass

Table 4.1.1.13 Results of Testing of Accelerated Weathering Resistance

Property		Unit	Requirement	Results	
Accelerated weathering resistance of:	Lamina @ 2 000 h	Durex Flexcrete/ Durex Architectural Coatings Finish	No unit	No cracking, flaking or deleterious effects	Pass
		Durex Uniplast/ Durex Architectural Coatings Finish			Pass
		Durex Monobase/ Durex Architectural Coatings Finish			Pass
	WRB @ 250 h	Durex Green Guard			Pass
		Durex Blue Shield			Pass
		Durex Flexcrete			Pass
		Durex Ectoflex			Pass
		Durex Dur-A-Mastic 100			Pass
Durex AirStop	Pass				

Table 4.1.1.14 Results of Testing of Salt-spray Resistance

Property		Unit	Requirement	Results
Salt-spray resistance @ 300 hours	Durex Flexcrete/ Durex Architectural Coatings Finish	No unit	No cracking, flaking or deleterious effects	Pass
	Durex Monobase/ Durex Architectural Coatings Finish			Pass
	Durex Uniplast/ Durex Architectural Coatings Finish			Pass

Table 4.1.1.15(a) Results of Testing of Durability Under Environmental Cyclic Conditions⁽¹⁾

Property		Unit	Requirement	Results
Preconditioning (drainage evaluation)	L	Report water quantity	introduced	13.5
			drained	4.36
			retained	9.14
Environmental cycling (60 cycles) ^{(1), (2)}	No unit	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat	Pass	
Reduction in adhesive bond strength	MPa	0.08	0.15 ⁽³⁾ 0.15 ⁽⁴⁾	

Notes to Table 4.1.1.15(a):

1. The chosen system for the Durability Under Environmental Cyclic Conditions test was based on “Durex Flexlite ADH” with “Durex Flexcrete” as the WRB/adhesive, EPS Type 1 insulation, and “Durex Flexcrete/Durex Architectural Coatings Finish (Marble Coat 1.0).”
2. The proponent opted to carry the Durability Under Environmental Cyclic Conditions test through an additional 60 cycles, totaling 120 cycles.
3. Adhesion strength of base coat
4. Adhesion strength of finish coat

Table 4.1.1.15(b) Results of Testing of Durability Under Environmental Cyclic Conditions⁽¹⁾

Property	Unit	Requirement	Results	
Preconditioning (drainage evaluation)	L	Report water quantity	introduced	13.5
			drained	11.38
			retained	2.12
Environmental cycling (60 cycles)⁽¹⁾⁽²⁾	No unit	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat	Pass	
Residual adhesive bond strength	MPa	0.08	0.35 ⁽³⁾ 0.34 ⁽⁴⁾	

Notes to Table 4.1.1.15(b):

1. The proponent opted to carry the Durability Under Environmental Cyclic Conditions test through an additional 60 cycles, totaling 120 cycles.
2. The chosen system for the Durability Under Environmental Cyclic Conditions test was based on a worst-case scenario with “Durex Quantum Select” as the tested system with “Durex Flexcrete” as the WRB, “Durex Flexcrete” as the adhesive, “Durex Quantum Select EPS” GDDC as the insulation and “Durex Architectural Coatings Finish” as the lamina.
3. Adhesion strength of base coat
4. Adhesion strength of finish coat

Table 4.1.1.15(c) Results of Testing of Durability Under Environmental Cyclic Conditions⁽¹⁾

Property	Unit	Requirement	Results	
Preconditioning (drainage evaluation)	L	Report water quantity	introduced	13.5
			drained	6.42
			retained	7.08
Environmental cycling (60 cycles)⁽¹⁾⁽²⁾	No unit	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat	Pass	
Residual adhesive bond strength	MPa	0.08	0.35 ⁽³⁾ 0.37 ⁽⁴⁾	

Notes to Table 4.1.1.15(c):

1. The Durability Under Environmental Cyclic Conditions was based on a worst-case scenario with “Durex Equalite,” with “Durex Flexseal” as the WRB, mechanically fastened mineral wool insulation, and “Durex Uniplast/Durex Architectural Coatings Finish” as the lamina
2. The proponent opted to carry the Durability Under Environmental Cyclic Conditions test through an additional 60 cycles, totaling 120 cycles.
3. Adhesion strength of base coat
4. Adhesion strength of finish coat

Table 4.1.1.16(a) Results of Testing of Breaking Strength Resistance of Reinforcement Mesh (165.0 g/m² (4.5 oz) . (Gavazzi S.A.)⁽¹⁾

Property		Unit	Requirement	Result	
				Weft	Warp
Initial strength		N/mm	35	68	50
Loss of strength after	30-day soak	%	29	29	28
	60-day soak		38	38	28
	90-day soak ⁽²⁾		46	46	26
Residual strength after	30-day soak	N/mm	48	48	36
	60-day soak		42	42	36
	90-day soak		37	37	37

Notes to Table 4.1.1.16(a):

1. Gavazzi S.A. Conformance with the balance of the mesh tests is based on their CSTBat certification (CSTB R2EM/EM12-118 certification).
2. Alkaline test based on 28-day immersion in tri-alkali solution.

Table 4.1.1.16(b) Results of Testing of Breaking Strength Resistance of Reinforcement Mesh (140.0 g/m² (4.1 oz) – (ADFORS Saint-Gobain)

Property		Unit	Requirement	Result	
Ash content		%	Report value	14.7	
Mass per unit area		g/m ²	Report value	140	
Weight of glass		g/m ²	Report value	126.0	
Tensile strength		N/mm		Weft	Warp
Initial tensile strength			≥ 35	37.2	40.3
Loss of tensile strength after	28-day 3 ion soak	%	≤ 50	17.7	7.3
Residual tensile strength after	28-day 3 ion soak	N/mm	≥ 20	30.6	37.3
Elongation @ break	initial	%	Report value	3.3	4.1
	after 28-day 3 ion soak			2.8	3.8

Table 4.1.1.17(a) Results of Testing of Impact Resistance⁽¹⁾

Property		Unit	Requirement	Result
Impact resistance	10 J Durex Flexcrete/ Gavazzi 4.5 oz. mesh/ Marble Coat	No units	6/10 free-fall drops shall show no perforation (broken mesh)	10/10 Pass
	3 J Durex Flexcrete/ Gavazzi 4.5 oz. mesh/ Marble Coat		6/10 free-fall drops shall show no cracks	8/10 Pass

Note to Table 4.1.1.17(a):

1. The product was also tested for an impact resistance of 15 J with 5/10 passing.

Table 4.1.1.17(b) Results of Testing of Impact Resistance⁽¹⁾

Property			Unit	Requirement	Result
Impact resistance	10 J	Durex Uniplast Acrybond-S/ ADFORS Saint-Gobain 6 oz. mesh/ Durex Architectural Coatings Finish	No units	6/10 free-fall drops shall show no perforation (broken mesh)	10/10 Pass
	3 J	Durex Flexcrete/ 190 g/m ² mesh/ Durex Architectural Coatings Finish		6/10 free-fall drops shall show no cracks	8/10 Pass

Note to Table 4.1.1.17(b):

- The product was also tested for an impact resistance of 15 J with 5/10 passing.

Table 4.1.1.18(a) Results of Testing of Wind Load Resistance Durex Quantum Select

Reference Wind Pressure (kPa)	Sustained		Cycling		Gust Test Pressure		Deflection Test		
	P ₁ , P' ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa) 2.18 x P ₁ , P' ₁		Test Pressure P ₃ , P' ₃ (Pa) 2.18 x P ₁ , P' ₁	Measured Maximum Net Midspan Deflections (mm)	
		Pass		Pass		Pass		Stud Height 3 050 mm	Sheathing Span 406 mm
Q ₅₀ < 0.45	± 450	Pass	± 660	Pass	± 980	Pass	+ 980	5.7	0.1
							-980	-5.3	-0.1
Q ₅₀ < 0.55	± 550	Pass	± 800	Pass	± 1 200	Pass	+1 200	6.9	0.1
							-1 200	-6.6	-0.1
Q ₅₀ < 65	± 650	Pass	± 950	Pass	± 1 410	Pass	+1 410	8.2	0.1
							-1 410	-7.7	-0.1
Q ₅₀ < 75	± 750	Pass	± 1 090	Pass	± 1 630	Pass	+1 630	9.4	0.1
							-1 630	-8.9	-0.1
Q ₅₀ < 85	± 850	Pass	± 1 240	Pass	± 1 850	Pass	+1 850	10.7	0.1
							-1 850	-10.1	-0.1
Q ₅₀ < 1.00	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	+2 180	12.6	0.2
							-2 180	-11.9	-0.2
Maximum test pressure @ L/180 deflection (no structural failure)							+2 920	16.9	Not applicable
							-3 096		
Ultimate structural test pressure							+3 155	Pass	
							-3 155	Sheathing separation from steel studs	

Notes to Table 4.1.1.18(a):

- The chosen system for the Wind Load Resistance test was based on “Durex Quantum Select” as the worst-case scenario (flat EPS are considered as best-case scenario in comparison with GDDC, thus systems with flat EPS are expected to have equal or higher wind load resistance pressures).
- Wall assembly specimen of 3 048 mm × 3 124 mm, 18-ga steel stud @ 406 mm c/c with 13 mm-thick glass-fibre-faced gypsum sheathing mechanically fastened to steel studs with 32-mm-long self-drilling screws @ 300 mm c/c
- “Durex Flexcrete” trowel-applied onto the sheathing substrate, “Durex Flexcrete” as an adhesive/base coat and “Durex Architectural Coatings” as a finish coat
- 600 mm × 1200 mm, 50 mm-thick expanded polystyrene insulation adhered to the substrate using “Durex Flexcrete” trowel-applied adhesive/base coat
- “Durex Flexcrete” base coat embedding 142 g/m² reinforcing mesh

Table 4.1.1.18(b) Results of Testing of Wind Load Resistance⁽¹⁾ of “Durex Quantum Select MF”

Reference Wind Pressure (kPa)	Sustained		Cycling		Gust		Deflection Test		
	P ₁ , P' ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa)		Test Pressure P ₃ , P' ₃ (Pa) 2.18 x P ₁ , P' ₁	Measured Maximum Net Midspan Deflections (mm)	
								Stud Height 3 050 mm	Sheathing Span 406 mm
Q ₅₀ < 0.45	± 450	Pass	± 660	Pass	± 980	Pass	+ 980	5.2	1.4
							-980	-6.0	-1.4
Q ₅₀ < 0.55	± 550	Pass	± 800	Pass	± 1 200	Pass	+1 200	6.4	1.7
							-1 200	-7.3	-1.7
Q ₅₀ < 0.65	± 650	Pass	± 950	Pass	± 1 410	Pass	+1 410	7.5	2.0
							-1 410	-8.6	-2.0
Q ₅₀ < 75	± 750	Pass	± 1 090	Pass	± 1 630	Pass	+1 630	8.6	2.3
							-1 630	-9.9	-2.3
Q ₅₀ < 85	± 850	Pass	± 1 240	Pass	± 1 850	Pass	+1 850	9.8	2.6
							-1 850	-11.3	-2.6
Q ₅₀ < 1.00	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	+2 180	11.6	3.1
							-2 180	-13.3	-3.1
Maximum test pressure @ L/180 deflection (no structural failure)							+3 187	16.9	Not applicable
							-2 770		
Ultimate structural test pressure							+3 250	Pass	
							-3 215	Buckling of steel studs	

Note to Table 4.1.1.18(b):

1. Test conducted on systems using a self-adhered modified bituminous membrane as the WRB and Durex Mechanical Fasteners.

Table 4.1.1.18(c) Results of Wind Load Resistance Testing for Mechanically Fastened “Durex Equalite”⁽¹⁾

Reference Wind Pressure (kPa)	Sustained		Cycling		Gust		Deflection Test		
	P ₁ , P' ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa)		Test Pressure P ₃ , P' ₃ (Pa) 2.18 x P ₁ , P' ₁	Measured Maximum Net Midspan Deflections (mm)	
		Pass		Pass		Pass		Stud Height 3 050 mm	Sheathing Span 406 mm
Q50 < 0.45	± 450	Pass	± 660	Pass	± 980	Pass	+ 980	6.4	1.3
							-980	-6.7	-1.6
Q50 < 0.55	± 550	Pass	± 800	Pass	± 1 200	Pass	+1 200	7.9	1.6
							-1 200	-8.2	-2.0
Q50 < 65	± 650	Pass	± 950	Pass	± 1 410	Pass	+1 410	9.3	1.9
							-1 410	-9.6	-2.3
Q50 < 75	± 750	Pass	± 1 090	Pass	± 1 630	Pass	+1 630	10.7	2.2
							-1 630	-11.1	-2.7
Q50 < 85	± 850	Pass	± 1 240	Pass	± 1 850	Pass	+1 850	12.2	2.5
							-1 850	-12.6	-3.1
Q50 < 1.00	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	+2 180	14.3	3.0
							-2 180	-14.9	-3.6
Maximum test pressure @ L/180 deflection (no structural failure)							2 579	16.9	Not applicable
							-2 473		
Ultimate structural test pressure							2 502	Pass	
							-3 956	Steel studs buckled under pressure	

Note to Table 4.1.1.18(c):

1. Test conducted on systems using a self-adhered modified bituminous membrane as the WRB.

Applications over Wood Substrates (Plywood/OSB)

Table 4.1.1.19 Results of Testing of Adhesion of WRB to Plywood/OSB Substrates

Property			Unit	Requirement No detachment at bonding plane @	Result
Adhesion bond to OSB of:	Durex Green Guard	dry state	MPa	0.25	0.583
		1-h soaking		0.25	0.694
		24-h soaking		0.25	0.864
	Durex Blue Shield	dry state		0.25	0.583
		1-h soaking		0.25	0.694
		24-h soaking		0.25	0.864
	Durex Dur-A-Mastic 100	dry state		0.25	0.76
		1-h soaking		0.25	0.81
		24-h soaking		0.25	0.67

Table 4.1.1.19 Results of Testing of Adhesion of WRB to Plywood/OSB Substrates (cont.)

Property		Unit	Requirement No detachment at bonding plane @	Result
Durex AirStop	dry state		0.28	0.81
	1-h soaking		0.28	0.74
	24-h soaking		0.28	0.88

Table 4.1.1.20(a) Results of Testing of Joint Disruption Resistance, “Durex Green Guard,” “Durex Joint Guard” as WRB

Property	Unit	Requirement ⁽¹⁾	Result				
			Joint Width				
			2-mm	4-mm			
Joint disruption resistance	--	The WRB at joints on 2 assemblies shall show no cracking, delaminating or any other deleterious effects at a transverse bending of L/180				Pass	
Joint extension @ L/180	mm	Report value	0.12	0.17			
Joint extension @ L/360			0.09	0.11			
Joint extension @ L/720			0.05	0.06			
Applied load @ L/180	kN		5.82	5.85			
Applied load @ L/360			2.93	2.94			
Applied load @ L/720			1.44	1.47			

Note to Table 4.1.1.20(a):

1. The system’s joint disruption resistance was measured at L/360 and L/720.

Table 4.1.1.20(b) Results of Testing of Joint Disruption Resistance, “Durex Blue Shield” as WRB

Property	Unit	Requirement ⁽¹⁾	Result		
			Joint Width		
			2-mm	4-mm	
Joint disruption resistance		The WRB at joints on 2 assemblies shall show no cracking, delaminating or any other deleterious effects at a transverse bending of L/180			Pass
Joint extension @ L/180	mm	Report value	0.12	0.17	
Joint extension @ L/360			0.09	0.11	
Joint extension @ L/720			0.05	0.06	
Applied load @ L/180	kN		5.82	5.85	
Applied load @ L/360			2.93	2.94	
Applied load @ L/720			1.44	1.47	

Note to Table 4.1.1.20(b):

1. The system’s joint disruption resistance was measured at L/360 and L/720.

Table 4.1.1.20(c) Results of Testing of Joint Disruption Resistance, “Durex AirStop” as WRB

Property	Unit	Requirement ⁽¹⁾	Result		
			Joint Width		
			2-mm	4-mm	
Joint disruption resistance		The WRB at joints on 2 assemblies shall show no cracking, delaminating or any other deleterious effects at a transverse bending of L/180			Pass
Joint extension @ L/180	mm	Report value	0.11	0.15	
Applied load @ L/180	kN		5.76	5.81	

Note to Table 4.1.1.20(c):

1. The system’s joint disruption resistance was measured at L/360 and L/720.

Table 4.1.1.21(a) Results of Testing of Water Transmission Resistance (WTR), “Durex Green Guard” and “Durex Joint Guard”

Property	Unit	Requirement	Results	
Joint relaxation resistance	kg/m ² ·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of 2×10^{-7} kg/m ² ·s	Sample No.	
			1	1.39×10^{-7}
			2	1.02×10^{-7}
			3	1.31×10^{-7}
			4	0.64×10^{-7}
			5	1.18×10^{-7}

Table 4.1.1.21(b) Results of Testing of Water Transmission Resistance (WTR), “Durex Blue Shield”

Property	Unit	Requirement	Results	
Joint relaxation resistance	kg/m ² ·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of 2×10^{-7} kg/m ² ·s	Sample No.	
			1	1.39×10^{-7}
			2	1.02×10^{-7}
			3	1.31×10^{-7}
			4	0.64×10^{-7}
			5	1.18×10^{-7}

Table 4.1.1.21(c) Results of Testing of Water Transmission Resistance (WTR), “Dur-A-Mastic 100”

Property	Unit	Requirement	Results	
Joint relaxation resistance	kg/m ² ·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of $\leq 2 \times 10^{-7}$ kg/m ² ·s	Sample No.	
			1	2×10^{-7}
			2	2×10^{-7}
			3	2×10^{-7}
			4	2×10^{-7}
			5	2×10^{-7}

Table 4.1.1.22(a) Results of Testing of Water Transmission Resistance (WTR), “Durex Green Guard” and “Durex Joint Guard”

Property	Unit	Requirement	Results	
WTR	kg/m ² ·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average Water Transmission Rate (WTR) of 2×10^{-7} kg/m ² ·s	Sample No.	
			1	0.96×10^{-7}
			2	1.52×10^{-7}
			3	0.80×10^{-7}
			4	0.91×10^{-7}
			5	0.86×10^{-7}

Table 4.1.1.22(b) Results of Testing of Water Transmission Resistance (WTR), “Durex Blue Shield”

Property	Unit	Requirement	Results	
WTR	kg/m ² ·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average Water Transmission Rate (WTR) of 2×10^{-7} kg/m ² ·s	Sample No.	
			1	0.96×10^{-7}
			2	1.52×10^{-7}
			3	0.80×10^{-7}
			4	0.91×10^{-7}
			5	0.86×10^{-7}

Table 4.1.1.23(a) Results of Testing of Water Vapour Transmission (WVT), “Durex Green Guard”

Property	Units	Requirement	Results			
			Sample No.	Coated	Un-coated	Difference
WVT	ng/(Pa·s·m ²)	Report value of the WVT rate of the WRB in combination with the OSB applied at the maximum thickness and the OSB alone	1	67.5	112.8	45.3
			2	68.1	131.1	63
			3	64.3	120.2	55.9
			Average	66.6	121.4	54.8

Table 4.1.1.23(b) Results of Testing of Water Vapour Transmission (WVT), “Durex Blue Shield”

Property	Units	Requirement	Results			
			Sample No.	Coated	Un-coated	Difference
WVT	ng/(Pa·s·m ²)	Report value of the WVT rate of the WRB in combination with the OSB applied at the maximum thickness and the OSB alone	1	67.5	112.8	45.3
			2	68.1	131.1	63
			3	64.3	120.2	55.9
			Average	66.6	121.4	54.8

Table 4.1.1.23(c) Results of Testing of Water Vapour Transmission (WVT), “Durex Dur-A-Mastic 100”

Property	Units	Requirements	Results			
			Sample No.	Coated	Un-coated	Difference
WVT	ng/(Pa·s·m ²)	Report value of the WVT rate of the WRB in combination with the OSB applied at the maximum thickness and the OSB alone	1	72	90	22
			2	70	99	29
			3	90	118	28
			Average	77.3	102.3	25

Table 4.1.1.23(d) Results of Testing of Water Vapour Transmission (WVT), “Durex Air Stop”

Property	Units	Requirements	Results			
			Sample No.	Coated	Un-coated	Difference
WVT	ng/(Pa·s·m ²)	Report value of the WVT rate of the WRB in combination with the OSB applied at the maximum thickness and the OSB alone	1	98	90	8
			2	56	99	43
			3	71	118	47
			Average	75	102.3	27.3

Table 4.1.1.24. Results of Testing of Accelerated Weathering of WRB

Property	Units	Requirements	Results	
Accelerated weathering resistance	No units	The WRB applied over OSB shall show no cracking, delamination, flaking or any deleterious effects following 250 h exposure to Xenon arc	Sample No.	
			1	Pass
			2	Pass
			3	Pass
			4	Pass
			5	Pass
			6	Pass

Table 4.1.1.25. Results of Testing of Drainage Capacity

Property	Unit	Requirement	Result								
			Panel 1 total (g)			Panel 2 total (g)			Panel 3 total (g)		
			Retained water		Result	Retained water		Result	Retained water		Result
			1 h	48 h		1 h	48 h		1 h	48 h	
Drainage capacity	g/m ²	The unit-retained water (based on the projected drainage area) following 1 h, and 48 h of drainage period shall not be greater than 30 g/m ² and 15 g/m ² , respectively, for any single test specimen	24.7	0.0	Pass	18.3	0.0	Pass	20.3	0.0	Pass
	%	The drainage capacity shall not be less than 98% of the water mass delivered into the EIFS wall specimen	99.6			99.7			99.7		

Table 4.1.1.26. Nail Popping Resistance

Property		Unit	Requirement	Result	
Nail popping resistance	Durex Green Guard	No unit	There shall be no cracking or delamination of the WRB following 1 mm nail protrusion from the nail's original preset of 1 mm below the surface of the OSB substrate	Sample No.	Result
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
	Durex AirStop			1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
				6	Pass
	Durex Dur-A-Mastic 100			1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
				6	Pass

4.1.2 Fire Performance

Where allowed by the Code through conformance to Article 3.1.5.5. of Division B of the NBC 2015, the “Durex Quantum Select” system having “Green Guard” as the WRB, “Flexcrete” as the adhesive, “Quantum Select EPS” as the EPS Type 1 or Type 2 insulation boards, up to 152-mm-thick, “Flexcrete” or “Uniplast Acrybond-S” as the base coat, “Architectural Coatings” as the finish coat; “Durex Standard Mesh” having a minimum weight of 142.5 g/m² and 125-mm mesh overlap when using 152-mm-thick insulation, and 100-mm mesh overlap when using lesser thicknesses, are acceptable for use in buildings required to be of noncombustible construction that are not more than three storeys in height if not sprinklered, and an unlimited number of storeys in height if sprinklered. For a detailed description of the compliance of the related systems to the requirements of Article 3.1.5.5. of Division B of the NBC 2010, please refer to Intertek Listing Information of Quantum Select, SPEC ID: DPL-WEIFS 30-01 and Intertek Report Number 100432565COQ-004a, Revised date January 29 2013.

Where allowed by the Code through conformance to Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, “Durex Flexlite Select, Durex Quantum Select, Durex Quantum Select ICF, Durex Insulite EW-17, Durex Insulite Select, and Durex Flexlite ADH” are acceptable for use in the exposed face of buildings required to be of non-combustible construction, provided the interior surfaces of the wall assembly are protected by a thermal barrier conforming to Article 3.1.5.15. of Division B of the NBC 2015. For a detailed description of the compliance of “Durex Flexlite Select, Durex Quantum Select, Durex Insulite EW-17, Durex Insulite Select, and Durex Flexlite ADH” to the requirements of Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, please refer to ULC Listings, ULC FWFOC.EW17, ULC FWFOC.EW21 and ULC FWFOC.EW22 and Intertek report 12737641COQ-001 for further details on the combination of coatings/systems falling under the scope of the said listings.

5. Report holder

Durabond Products Ltd.
 55 Underwriters Road
 Scarborough, ON M1R 3B4

Tel: 416-759-4474
Fax: 416-759-4470
Web site: www.durabond.com

Plant(s)

Mississauga, ON
Scarborough, ON

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