



CCMC 13103-R CCMC Canadian code compliance evaluation

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Product names:	 Durex Cladlite Durex Equalite Durex Flexlite Durex IBS Durex Insulite Durex Panelite Durex Quantum
Compliance:	NBC 2010, NBC 2015, OBC
Criteria:	CCMC-TG-072413.01-15A, "CCMC Technical Guide for Exterior Insulation Finish Systems" CCMC-TG-072413.01C-10, "CCMC Technical Guide for Exterior Insulation Finish Systems"

In most jurisdictions this document is sufficient evidence for approval by Canadian authorities. Learn more about CCMC recognition Look for the trusted CCMC mark on products to verify compliance.





Compliance opinion

It is the opinion of the Canadian Construction Materials Centre that the <u>evaluated products</u>, 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 <u>conditions and limitations</u> stated in this evaluation, comply with the following codes:

National Building Code of Canada 2010

Code provision	Solution type
3.1.5.5. Combustible Components for Exterior Walls	Acceptable
3.1.5.12.(2) Foamed plastic insulation having a flame	Acceptable
3.2.3.8.(1)(b) Protection of Exterior Building Face	Acceptable
5.6.1.1.(1) Except as provided in , where a building	Acceptable
9.25.2.2.(1)(d) Insulation Materials	Acceptable
9.27.1.1.(5) Where cladding materials other than thos	Acceptable
9.27.2.1. Minimizing and Preventing Ingress and Damage	Acceptable
9.27.2.2.(1) Except as provided in , a cladding assem	Acceptable
9.27.2.3.(1) Where walls required to provide protecti	Acceptable
9.27.3.1. Elements of the Second Plane of Protection	Acceptable

National Building Code of Canada 2015

Code provision	Solution type
3.1.5.5. Combustible Cladding on Exterior Walls	Acceptable
3.1.5.15.(2) Except as provided in Sentences 3.1.5.15	Acceptable
3.2.3.8.(1)(b) Protection of Exterior Building Face	Acceptable
5.6.1.1.(1) Except as provided in Sentence 5.6.1.1.(Acceptable
5.9.4. Exterior Insulation Finish Systems	Acceptable
9.25.2.2.(1)(d) Insulation Materials	Acceptable
9.25.2.2.(1)(e) Insulation Materials	Acceptable
9.27.1.1.(5) Where an exterior insulation finish syst	Acceptable
9.27.2.1. Minimizing and Preventing Ingress and Damage	Acceptable
9.27.2.2.(1)(e) Minimum Protection from Precipitation Ingress	Acceptable
9.27.2.3.(1) Where walls required to provide protecti	Acceptable
9.27.3.1. Elements of the Second Plane of Protection	Acceptable
9.27.13. Exterior Insulation Finish Systems	Acceptable

Ontario Building Code

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.

The above opinion(s) is/are based on the evaluation by the CCMC of technical evidence provided by the evaluation holder, and is bound by the stated <u>conditions and limitations</u>. For the benefit of the user, a summary of the <u>technical information</u> that forms the basis of this evaluation has been included.

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Product information

Product names

- Durex Cladlite
- Durex Equalite
- Durex Flexlite
- Durex IBS
- Durex Insulite
- Durex Panelite
- Durex Quantum

Product description

The products are non-loadbearing exterior insulation and finish systems (EIFS) that can be assembled in panels under factorycontrolled 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; and
- a coating system (lamina) (1).

Note

1 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 glassfibre mesh reinforcement.

Below is a description of the different components of the systems.

Substrate

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

Water-resistive barrier (WRB) (2) (3)

The products use the following coatings as a WRB:

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.

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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 to achieve a minimum wet thickness varying between 1.5 mm to 2.5 mm.

Durex Ectoflex is a 2-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 (1 bag to 1 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.

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.

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 the <u>Trowel-spray or brush- or roller-applied coatings</u> section.

Durex EIFS Tape is a 100–450-mm, self-adhering, rubberized flashing tape with skrim 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 is 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.

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 that 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.

Note

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2 The 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 defence against water infiltration reaching the structure. The WRB must 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 2 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.

Adhesives (3)

Durex Flexcrete—See description of Durex Flexcrete in the Trowel-spray or brush- or roller-applied coatings section.

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 must range from 38–50 mm, while the size of the notches must be 10–13 mm in width and 10–13 mm in depth.

Note

3 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.

Mechanical fasteners (4)

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 be used 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.

Note

4 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.

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Insulation

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 ⁽⁵⁾ 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)

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 5 weeks or kiln-dried. See Figure 2 and Figure 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 must conform to the following:

- CAN/ULC-S701 ⁽⁶⁾, 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,
 - 110 mm, for the system defined in ULC Listing FWF07. EW17, when used in noncombustible construction in accordance with Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015,
 - 150 mm for the systems defined in ULC Listings FWFO7.EW21 and FWFO7. EW22, and when used in noncombustible construction in accordance with Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, and
 - 152 mm for the systems defined in Intertek Listing Information of Quantum Select, SPEC ID: 29367 and Design Listing: DPL-WEIFS 30-01, and when used in noncombustible construction in accordance with Article 3.1.5.5., Combustible Cladding on Exterior Walls, of Division B of the NBC 2015.
- Maximum board size is 610 mm × 1 219 mm for Durex EPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Insulite Select Graphite EPS
- Maximum board size is 600 mm × 2 440 mm for Durex XPS

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- 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."

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 must be CCMC-evaluated or certified and conform to the following:

- CAN/ULC-S702
- 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

Notes

- 5 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; therefore, it is not covered by the present technical opinion.
- 6 Conformance to CAN/ULC-S701 must be established through having the insulation under a recognized certification program and/or having a valid CCMC evaluation.

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.

Base coat (7)

Durex Flexcrete—See description in the <u>Adhesives</u> section. 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 the <u>Adhesives</u> section. 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.

Note

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.

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 5 different grades (8), 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.

Note

B 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.

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.

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 1. 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 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							

System family	System	Substrate	WRB	Joint treatment	Adhesives	Insulation	Base coats	Primers	Finish coats	Transition membranes
	Quantum Select 5.0	Concrete, masonry, glass mat, cement board Plywood/ OSB	DurexFlexcreteDurexGreenGuardDurexBlueShieldDurexDurA-Mastic100DurexEctoflexDurexGreenGuardDurexBlueShieldDurexDurexDurexDurexDurexDurexDurexBlueShieldDurexDurexBlueShieldDurexDurexDurexBlueShieldDurexDurexDurexDurexDurexBlueShieldDurex	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
	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

System family	System	Substrate	WRB	Joint treatment	Adhesives	Insulation	Base coats	Primers	Finish coats	Transition membranes
	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- XCell 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. 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 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	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

System family	System	Substrate	WRB	Joint treatment	Adhesives / mechanical fasteners	Insulation	Base coats	Primers	Finish Coats	Transition membranes
		Plywood/ OSB	Durex Green Guard Durex Blue Shield Durex Dur-A- Mastic 100							
	Durex Insulite EXT ADH	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	XPS Type 4	Durex Uniplast + Durex Acrybond S Durex Flexcrete Durex Monobase	Durex Brush Coat 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

System family	System	Substrate	WRB	Joint treatment	Adhesives / mechanical fasteners	Insulation	Base coats	Primers	Finish Coats	Transition membranes
	Durex Insulite 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 Green Guard Durex Blue Shield Durex Jurex Green Guard	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Insulite EPS Type 1 Graphite (GDDC) Insulite EPS Type 2 Graphite (GDDC)	Durex Uniplast + Durex Acrybond S Durex Flexcrete Durex Monobase	Durex Brush Coat Durex Dur-X- Cell 100	Durex Architectural Coatings Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape
	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 Flexcrete Durex Monobase	Durex Brush Coat Durex Dur-X- Cell 100	Durex Architectural Coatings Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane

Table 3. Durex Flexlite Components

System family	System	Substrate	WRB	Joint treatment	Adhesives / Mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
Durex flexiite	Flexitie ADH	Concrete, masonry, glass mat, cement board	Durex Flexcrete Durex Green Guard Durex Blue Shield Durex Dur-A- Mastic 100 Durex Ectoflex Durex AirStop Durex Green Guard Durex Blue Shield Durex Blue Shield	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	EPS Type 1 2	Durex Flexcrete Durex Monobase Durex Uniplast + Durex Acrybond S	Durex Brush Coat 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
	Flexlite MF	Concrete, masonry, glass mat, cement board Plywood/ OSB	Durex Flexseal	n/a	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

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System family	System	Substrate	WRB	Joint treatment	Adhesives / Mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
	Flexlite 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 Green Guard Durex Blue Shield Durex Blue	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Flexlite EPS Type 1 (GDDC) Flexlite EPS Type 2 (GDDC)	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

System family S	System	Substrate	WRB	Joint treatment	Adhesives / Mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
	Flexlite Select MF	Concrete, masonry, glass mat, cement board Plywood/ OSB	Durex Flexcrete	Durex Barrier Seal Tape + Durex Joint Guard Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase Durex VCA 3.0	Flexlite EPS Type 1 (GDDC) Flexlite EPS Type 2 (GDDC)	Durex Flexcrete Durex Monobase Durex Uniplast + Durex Acrybond S	Durex Brush Coat Durex Dur-X- Cell 100	Durex Architectural Coatings Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape Durex FlexSeal Membrane

Table 4. 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

System family	System	Substrate	WRB	Joint treatment	Adhesives / mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
	Durex Equalite Select	Concrete, masonry, glass mat, cement board, plywood/ OSB	Durex Flex Seal 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 5. 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 Blue Shield Durex Dur-A- Mastic 100	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 Quantum Select EPS Type 1 Graphite (GDDC) Durex Quantum Select 5.0 EPS Type 3 (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase NC	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

System family	System	Substrate	WRB	Joint treatment	Adhesives	Insulation	Base coats	Primers	Finish coats	Transition membranes
	Durex Integrated Cladding System	Glass mat, cement board, plywood/ OSB	Durex Green Guard Durex Blue Shield Durex Dur-A- Mastic 100	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 Quantum Select EPS Type 1 Graphite (GDDC) Durex Quantum Select 5.0 EPS Type 3 (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase NC	Durex Brush Coat	Durex Architectural Coatings Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape

Table 6. 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

System family	System	Substrate	WRB	Joint treatment	Adhesives / mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
	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 Architectural Coatings FX Durex Classic Series Coatings Durex New Generation Series Coatings	Durex EIFS Tape Durex Primerless EIFS Tape

Table 7. 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

System family S	System	Substrate	WRB	Joint treatment	Adhesives / mechanical fasteners	Insulation	Base coats	Primers	Finish coats	Transition membranes
	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 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

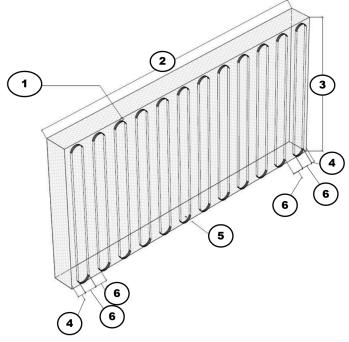


Figure 1. Durex Quantum Select EPS and Durex Quantum Select 5.0 EPS insulation drainage board

- 1. Chanel depth 10 mm
- 2. 1 219 mm
- 3. 610 mm
- 4. 25 mm
- 5. R 25 mm
- 6. 51 mm

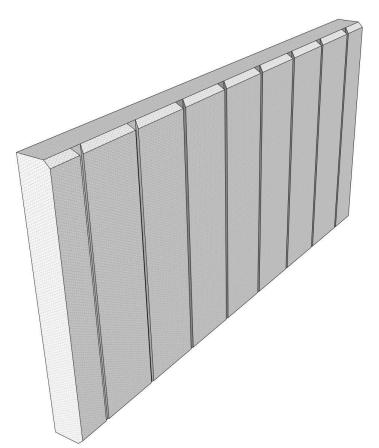


Figure 2. Durex Flexlite Select EPS Board (GDDC) and Durex Insulite Select Graphite EPS Board (GDDC) (side view)

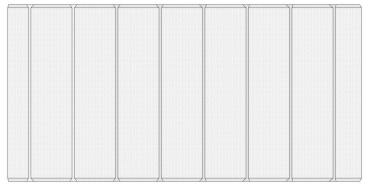


Figure 3. Durex Flexlite Select EPS Board (GDDC) and Durex Insulite Select Graphite EPS Board (GDDC) (front view)

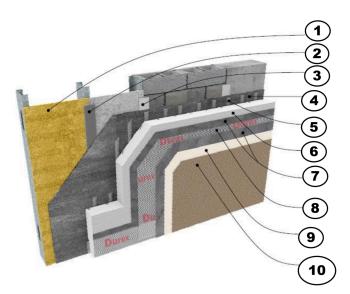


Figure 4. Durex Quantum Select over non-wood applications

- 1. Substrate
- 2. Joint treatment
- 3. Transition membrane
- 4. WRB (water-resistive barrier)
- 5. Insulation adhesive
- 6. Exterior insulation
- 7. Base coat
- 8. Reinforcing fibreglass mesh
- 9. Primer
- 10. Finish coat

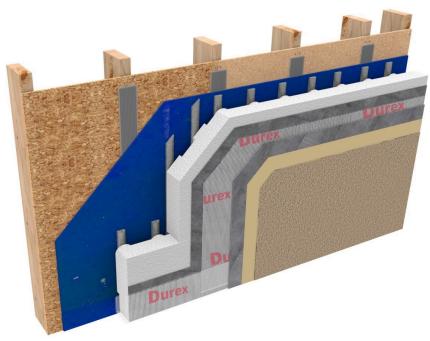


Figure 5. Durex Quantum Select over wood applications

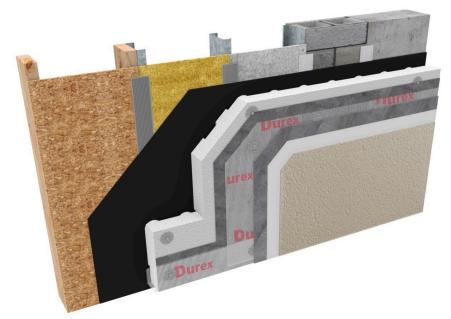


Figure 6. Durex Quantum Select MF over different substrate applications

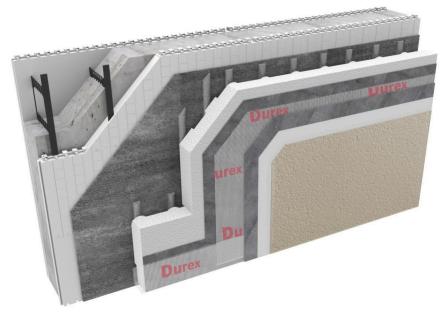


Figure 7. Durex Quantum Select ICF applications over insulated concrete forms

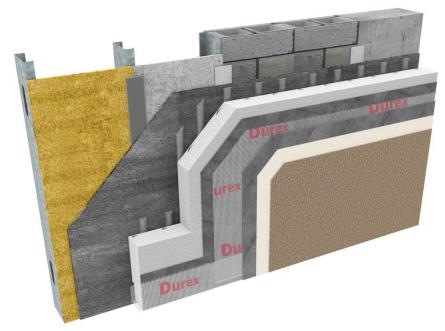


Figure 8. Durex Flexlite Select over non-wood applications

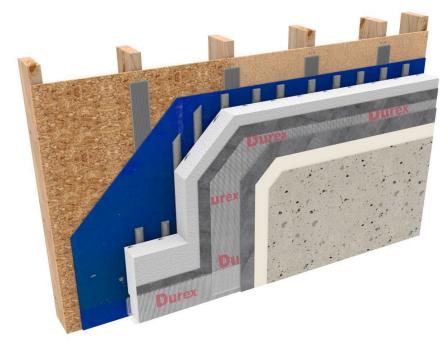


Figure 9. Durex Flexlite Select over wood applications

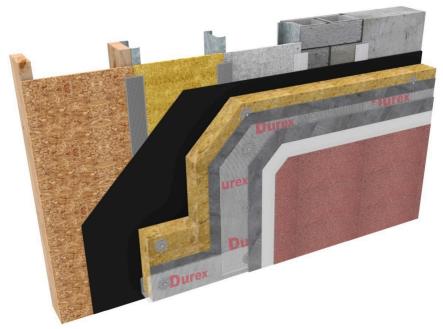


Figure 10. Durex Equalite over different substrate applications

Manufacturing plants

This evaluation is limited to products produced at the following plants:

	Manufactu	uring plants
Product names	Mississauga, ON, CA	Scarborough, ON, CA
Durex Cladlite	Θ	Ø
Durex Equalite	Ø	Ø
Durex Flexlite	0	Ø
Durex IBS	0	Ø
Durex Insulite	0	Ø
Durex Panelite	0	Ø
Durex Quantum	0	Ø

❷ Indicates that the product from this manufacturing facility has been evaluated by the CCMC

Conditions and limitations

The CCMC's compliance opinion is bound by this product being used in accordance with the conditions and limitations set out below.

- The product is intended for use as an exterior wall cladding on buildings falling under the scope of Parts 5 and 9 of the NBC 2015.
- When used in existing buildings, the applicable or the relevant elements of the existing buildings must comply with the requirements of the NBC 2015.
- 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 must not exceed 3.0 mm.
- The products are acceptable for use on 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 must be designed by a professional engineer or architect in accordance with the manufacturer's criteria and the requirements of the NBC 2010 and the NBC 2015.
- Durex IBS / Durex Panelite / Durex Cladlite prefabricated systems must 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 Q₅₀ < 1.0 kPa.
- The EIF systems utilizing Durex Quantum Select and Durex Flexlite EPS GDDC insulation, at minimum 50.8-mm (2-inch) of
 overall GDDC insulation thickness, may be used with RSI 3.8 (R-22) wood back-up walls at locations having 6 999 heating
 degree-days or less in accordance with the requirements of Article 9.25.5.2., Position of Low Permeance Materials, of
 Division B of the NBC 2015 and at maximum 35% indoor relative humidity. The maximum ratio of outboard to inboard
 thermal resistance of 0.35 is reached with an RSI 3.8 (R-22) wood back-up wall (See Table 48 and Table 49 of this report).
- 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.
- When the systems are used on existing walls, the addition of 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 detrimental effects of moisture accumulation as 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, once the EIFS (the product evaluated in this evaluation) is installed, the existing exterior walls must meet the requirements of the NBC 2015 for heat transfer, air leakage and condensation control.
- When used on existing walls of sprinklered buildings or existing walls of the buildings with not more than 3 storeys, 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, and 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. The potential for moisture accumulation as a result of the

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addition of materials is very specific to the existing wall construction. Therefore, the installation must be in accordance with Appendix Note A-5.1.2.1(1), Application (Environmental Separation), of Division B of the NBC 2015.

- The products can provide additional thermal insulation to the wall assembly 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 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: 29367 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 FWFO7.EW17, ULC FWFO7.EW21 and ULC FWFO7.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 must 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 must 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 in accordance with 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 C1177/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) must remain unobstructed so as to form a clear drainage cavity behind the insulation boards and it must 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 must 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.

Technical information

This evaluation is based on demonstrated conformance with the following criteria:

Criteria number	Criteria name
CCMC-TG-072413.01-15A	CCMC Technical Guide for Exterior Insulation Finish Systems
CCMC-TG-072413.01C-10	CCMC Technical Guide for Exterior Insulation Finish Systems

Performance requirements

Table 8. Results of testing of ash content

	l	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
	WRB	Durex Ectoflex			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 9. Results of infrared analysis testing

Property		Requirement	Result
Adhesive	Durex Monobas	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		

Property		Requirement	Result
	Durex Ectoflex		
	Durex Ectoflex B		
	Durex Flexcrete		
	Durex Flexcrete B		
	Durex Green Guard		

Note

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

Table 10. Results of testing of adhesion of WRB to substrates other than plywood/OSB

Property		Unit	Requirement no detachment at bonding plane @	Result
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	dry state		0.25	0.53
gypsum	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

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Property		Unit	Requirement no detachment at bonding plane @	Result
	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
Durex Dur-A-Mastic 100 to glass mat gypsum	dry state		0.25	0.43

Property		Unit	Requirement no detachment at bonding plane @	Result
	2-h drying		0.08	0.23
	7-d drying		0.25	0.27

Table 11. Results of testing of adhesion bond of adhesive to WRB

Property		Unit	Requirement no detachment at bonding plane @	Result
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
Durex Monobase to Durex Dur-A-Mastic 100	dry state		0.25	1.11

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Property		Unit	Requirement no detachment at bonding plane @	Result
	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 12. Results of testing of adhesion bond of adhesive to insulation

Property		Unit	Requirement no detachment at bonding plane @	Result
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

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

Table 13. Results of testing of lamina bond strength tests (base coat / finish coat / insulation)

Property		Unit	Requirement no detachment at bonding plane @	Result
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

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Property		Unit	Requirement no detachment at bonding plane @	Result
	7-d drying		0.08	1.16
x Uniplast + Durex Acrybond S / Durex Architectural Coatings	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
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

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Property	Un	Requirement no detachment at bonding plane @	Result
2-h dryin		0.08	0.44
7-d dryin		0.08	0.45

Table 14. Results of testing of water vapour transmission (WVT) of WRB

Property			Unit	Requirement	Result
WVT of WRB Durex Flexcrete Durex Green Guar	Durex Flexcrete	2.5 mm wet	ng/(Pa⋅s⋅m²)	Report value	276
	Durex Green Guard	1 mm wet			48
		1.5 mm wet			11
	Durex Blue Shield Durex Dur-A-Mastic 100 Durex Ectoflex	1 mm wet			48
		1.5 mm wet			11
		1.5 mm wet			248
		2.5 mm wet			216
		1.5 mm wet 1 coat			90
		1.5 mm wet 2 coat			77

Table 15. Results of testing of water vapour transmission (WVT) of lamina

Property			Unit	Requirement	Result
WVT of lamina	base coat	Durex Flexcrete	ng/(Pa⋅s⋅m²)	≥ 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 16. Results of testing of water absorption of base coat

Property	Unit	Requirement	Result
Durex Flexcrete	%	\leq 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

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Property	Unit	Requirement	Result
Durex Uniplast / Durex Architectural Coatings Finish (1)			9.75

Note

<u>1</u> Extra information provided by the proponent.

Table 17. Results of testing of water absorption coefficient of WRB at 72 hours

Property		Unit	Requirement	Result
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 18. Results of testing of impermeability to water of base coat

Property	Unit	Requirement	Results
Durex Flexcrete	h	No water penetration in less than 2 h	Pass
Durex Monobase			Pass
Durex Uniplast			Pass

Table 19. Results of testing of mildew and fungus resistance

Property	Unit	Requirement	Results
Finish Coat (Durex Architectural Coatings Finish)	-	No growth	Pass

Table 20. Results of testing of accelerated weathering resistance

Property		Unit	Requirement	Result
Lamina @	Durex Flexcrete/ Durex Architectural Coatings Finish	-	No cracking, flaking or deleterious effects	Pass
2 000 h Durex Uniplast/ Durex Architectural Coatings Finish			Pass	
	Durex Monobase/ Durex Architectural Coatings Finish			Pass

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Property		Unit	Requirement	Result
WRB @ 250 h	Durex Green Guard			Pass
	Durex Blue Shield			Pass
	Durex Flexcrete			Pass
	Durex Ectoflex Durex Dur-A-Mastic 100			Pass
				Pass
	Durex AirStop			Pass

Table 21. Results of testing of salt-spray resistance

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

Table 22. Results of testing of durability under environmental cyclic conditions I (1)

Property	Unit	Requirement						
Preconditioning	L	Report water quantity	Introduced					
(drainage evaluation)			Drained	4.36				
			Retained	9.14				
Environmental cycling (60 cycles) ⁽¹⁾ (2)	-	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat						
Reduction in adhesive bond strength	MPa	0.08		0.15 (3)				
				0.15 <u>(4)</u>				

Notes

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.

<u>3</u> Adhesion strength of base coat.

4 Adhesion strength of finish coat.

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Table 23. Results of testing of durability under environmental cyclic conditions II (1)

Property	Unit	t Requirement						
Preconditioning	L	Report water quantity	Introduced	13.5				
(drainage evaluation)			Drained	11.38				
			Retained	2.12				
Environmental cycling (60 cycles) (1) (2)	-	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat						
Residual adhesive bond strength	MPa	0.08		0.35 <u>(3)</u>				

Notes

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.
- <u>3</u> Adhesion strength of base coat.
- 4 Adhesion strength of finish coat.

Table 24. Results of testing of durability under environmental cyclic conditions III (1)

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

Notes

- 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.
- <u>3</u> Adhesion strength of base coat.
- <u>4</u> Adhesion strength of finish coat.

Table 25. Results of testing of breaking strength resistance of reinforcement mesh (165.0 g/m² (4.5 oz.)) (Gavazzi S.A.) (1)

				Re	sult
Property		Unit	Requirement	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

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 26. Results of testing of breaking strength resistance of reinforcement mesh (140.0 g/m² (4.1 oz.)) (ADFORS SaintGobain)

Property	Unit	Requirement	Re	sult	
Ash content	%	Report value	1	4.7	
Mass per unit area	g/m ²	Report value	Report value 140		
Weight of glass	g/m ²	Report value	12	26.0	
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	N/mm	≥ 20	30.6	37.3	
Elongation @ break	%	Report value	3.3	4.1	

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Property	Unit	Requirement	Re	sult	
	after 28-day 3 ion soak			2.8	3.8

Table 27. Results of testing of impact resistance I (1)

Prop	erty	Unit	Requirement	Result
10 J	Durex Flexcrete / Gavazzi 4.5 oz. mesh / Marble Coat	-	6/10 free-fall drops must show no perforation (broken mesh)	10/10 pass
3 J	Durex Flexcrete / Gavazzi 4.5 oz. mesh / Marble Coat		6/10 free-fall drops must show no cracks	8/10 pass

Note

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

Table 28. Results of testing of impact resistance II (1)

Prop	erty	Unit	Requirement	Result
10 J	Durex Uniplast Acrybond-S / ADFORS Saint-Gobain 6 oz. mesh / Durex Architectural Coatings Finish	-	6/10 free-fall drops must 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 must show no cracks	8/10 pass

Note

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

Table 29. Results of testing of wind load resistance Durex Quantum Select

	Susta	ined	Cycl	ling	Gust test pressure		Deflection test				
Reference wind pressure (kPa)							Test pressure P ₃ ,	Measured maximum net midspan deflections (mm)			
	P ₁ , P'	₁ (Pa)	P ₂ , P' ₂	2 (Pa)	P ₃ , P′ ₃ (Pa P ₁ , I		P' ₃ (Pa) 2.18 × P ₁ , P' ₁	Stud height 3 050 mm	Sheathing span 406 mm		
Q ₅₀ < 0.45	< 0.45 ±450 Pass ±660 Pass ±980 Pass	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 < 0.65	±650	Pass	±950	Pass	ss ±1 410	Pass	±1 410 Pass	+1 410	8.2	0.1	
			-1 410	-7.7	-0.1						

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	Susta	ined	Cycl	ing	Gust test pressure			Deflection test						
							Test pressure P ₃ ,		mum net midspan ions (mm)					
Reference wind pressure (kPa)	P ₁ , P′ ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa) 2.18 × P ₁ , P' ₁		P' ₃ (Pa) 2.18 × P ₁ , P' ₁	Stud height 3 050 mm	Sheathing span 406 mm					
Q ₅₀ < 0.75	±750	Pass	±1 090	Pass	±1 630	Pass	+1 630	9.4	0.1					
												-1 630	-8.9	-0.1
Q ₅₀ < 0.85	±850	Pass	±1 240	Pass	ass ±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 (deflect	ion (no s	tructur	al failure)		+2 920	16.9	Not applicable					
							-3 096							
Ultimate structural test p	Ultimate structural test pressure							Pass						
							-3 155	Sheathing separation from steel stud						

Notes

- 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; therefore, 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 × 1 200 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 30. Results of testing of wind load resistance (1) of Durex Quantum Select MF

	Susta	ined	Cycling		Gust test pressure		Deflection test			
	P ₁ , P' ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa) 2.18 × P ₁ , P' ₁		Test pressure P ₃ ,	Measured maximum net midspan deflections (mm)		
Reference wind pressure (kPa)							P' ₃ (Pa) 2.18 × P ₁ , P' ₁	Stud height 3 050 mm	Sheathing span 406 mm	
Q ₅₀ < 0.45	±450	Pass	±660	Pass	±980	±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	

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	Susta	Sustained P ₁ , P' ₁ (Pa)		ing	Gust test	oressure		Deflection test			
							Test pressure P ₃ ,		mum net midspan ions (mm)		
Reference wind pressure (kPa)	P ₁ , P' ₁			(Pa)	P ₃ , P' ₃ (Pa) 2.18 × P ₁ , P' ₁		P' ₃ (Pa) 2.18 × P ₁ , P' ₁	Stud height 3 050 mm	Sheathing span 406 mm		
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 < 0.75	±750	Pass	±1 090	Pass	±1 630	Pass	+1 630	8.6	2.3		
							-1 630	-9.9	-2.3		
Q ₅₀ < 0.85	±850 Pass ±1 240 Pas	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	deflect	ion (no s	tructur	al failure)		+3 187	16.9	Not applicable		
							-2 770				
Ultimate structural test p	oressure						+3 250	Pass			
							-3 215	Buckling	of steel studs		

Note

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

Table 31. Results of wind load resistance testing for mechanically fastened Durex Equalite (1)

	Sustained P ₁ , P' ₁ (Pa)		Cycling		Gust test pressure		Deflection test			
							Test pressure P ₃ ,	Measured maximum net midspan deflections (mm)		
Reference wind pressure (kPa)			P ₂ , P′ ₂ (Pa)		P ₃ , P' ₃ (Pa) 2.18 × P ₁ , P' ₁		P' ₃ (Pa) 2.18 × P ₁ , P' ₁	Stud height 3 050 mm	Sheathing span 406 mm	
Q ₅₀ < 0.45	±450	Pass	±660	Pass	±980	Pass	+980	6.4	1.3	
							-980	-6.7	-1.6	
Q ₅₀ < 0.55	±550	Pass	±800	Pass	±1 200	Pass	+1 200	7.9	1.6	
							-1 200	-8.2	-2.0	
Q ₅₀ < 0.65	±650	Pass	±950	Pass	±1 410	Pass	+1 410	9.3	1.9	
							-1 410	-9.6	-2.3	
Q ₅₀ < 0.75	±750	Pass	±1 090	Pass	±1 630	Pass	+1 630	10.7	2.2	

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	Susta	Sustained		ing	Gust test	pressure	Deflection test				
		P ₁ , P' ₁ (Pa)					Test pressure P ₃ ,		imum net midspan ions (mm)		
Reference wind pressure (kPa)	P ₁ , P' ₁			P ₂ , P′ ₂ (Pa)		a) 2.18 × P' ₁	P′ ₃ (Pa) 2.18 × P ₁ , P′ ₁	Stud height 3 050 mm	Sheathing span 406 mm		
							-1 630	-11.1	-2.7		
Q ₅₀ < 0.85	±850	Pass	±1 240	Pass	±1 850	Pass	+1 850	12.2	2.5		
							-1 850	-12.6	-3.1		
Q ₅₀ < 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 pressur	e @ L/180	deflect	ion (no s	tructur	al failure)		+2 579	16.9	Not applicable		
							-2 473				
Ultimate structural tes	t pressure						+2 502	Pass			
							-3 956	Steel studs buc	kled under pressure		

Note

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

Table 32. 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
	Durex AirStop	dry state		0.28	0.81
		1-h soaking		0.28	0.74
		24-h soaking		0.28	0.88

Table 33. Results of testing of joint disruption resistance, Durex Green Guard, Durex Joint Guard as WRB

				Result		
			Joint width			
Property	Unit	Requirement ⁽¹⁾	2-mm	4-mm	Result	
Joint disruption resistance	-	The WRB at joints on 2 assemblies must 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	Pass	
Joint extension @ L/360				0.09	0.11	Pass
Joint extension @ L/720			0.05	0.06	Pass	
Applied load @ L/ 180	kN	kN	5.82	5.85	Pass	
Applied load @ L/ 360			2.93	2.94	Pass	
Applied load @ L/ 720			1.44	1.47	Pass	

Note

1 The joint disruption resistance of the system was measured at L/360 and L/720.

Table 34. Results of testing of joint disruption resistance, Durex Blue Shield as WRB

				Result	
			J	ith	
Property	Unit	Requirement ⁽¹⁾	2-mm	4-mm	Result
Joint disruption resistance	-	The WRB at joints on 2 assemblies must 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	Pass
Joint extension @ L/360			0.09	0.11	Pass
Joint extension @ L/720			0.05	0.06	Pass
Applied load @ L/ 180	kN	kN	5.82	5.85	Pass
Applied load @ L/ 360			2.93	2.94	Pass

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			Result			
			J	th		
Property	Unit	Requirement (1)	2-mm	4-mm	Result	
Applied load @ L/ 720			1.44	1.47	Pass	

Note

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

Table 35. Results of testing of joint disruption resistance, Durex AirStop as WRB

				Result			
			Joint width				
Property	Unit	Requirement (1)	2-mm	4-mm	Result		
Joint disruption resistance	-	The WRB at joints on 2 assemblies must 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	Pass		
Applied load @ L/ 180	kN		5.76	5.81	Pass		

Note

<u>1</u> The joint disruption resistance of the system was measured at L/360 and L/720.

Table 36. Results of testing of water transmission resistance (WTR), Durex Green Guard and Durex Joint Guard

Property	Unit	Requirement	Sample no.	Result
Joint	xation environmental cycles must have a max. a			
relaxation resistance		environmental cycles must have a max. average WTR of $2 \times 10^{-7} \text{ kg/m}^2 \text{ s}$	2	1.02 × 10 ⁻⁷
			3	1.31 × 10 ⁻⁷
			4	0.64 × 10 ⁻⁷
			5	1.18 × 10 ⁻⁷

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Table 37. Results of testing of water transmission resistance (WTR), Durex Blue Shield

Property	Unit	Requirement	Sample no.	Result	
Joint	- J -				
relaxation resistance		environmental cycles must have a max. average WTR of 2 × 10 ⁻⁷ kg/m ² ·s	2	1.02 × 10 ⁻⁷	
			3	1.31 × 10 ⁻⁷	
			4	0.64 × 10 ⁻⁷	
			5	1.18 × 10 ⁻⁷	

Table 38. Results of testing of water transmission resistance (WTR), Dur-A-Mastic 100

Property	Unit	Requirement	Sample no.	Result
Joint	laxation	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-h	1	2 × 10 ⁻⁷
relaxation resistance		environmental cycles must have a max. average WTR of ≤ 2 × 10 ⁻⁷ kg/m ² ·s	2	2 × 10 ⁻⁷
			3	2 × 10 ⁻⁷
			4	2 × 10 ⁻⁷
			5	2 × 10 ⁻⁷

Table 39. Results of testing of water transmission resistance (WTR), Durex Green Guard and Durex Joint Guard

Property	Unit	Requirement	Sample no.	Result
Joint	kg/m²⋅s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-h	1	0.96 × 10 ⁻⁷
relaxation resistance		environmental cycles must have a max. average Water Transmission Rate (WTR) of 2 × 10 ⁻⁷ kg/m ² ·s	2	1.52 × 10 ⁻⁷
			3	0.80 × 10 ⁻⁷
				0.91 × 10 ⁻⁷
			5	0.86 × 10 ⁻⁷

Table 40. Results of testing of water transmission resistance (WTR), Durex Blue Shield

Property	Unit	Requirement	Sample no.	Result
Joint	kg/m²·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-h	1	0.96 × 10 ⁻⁷
relaxation resistance	environmental cycles must have a max. average Water Transmission Rate (WTR) of 2 × 10 ⁻⁷ kg/m ² ·s		2	1.52 × 10 ⁻⁷
		Kg/III S	3	0.80 × 10 ⁻⁷
			4	0.91 × 10 ⁻⁷

Property	Unit	Requirement	Sample no.	Result
			5	0.86 × 10 ⁻⁷

Table 41. Results of testing of water vapour transmission (WVT), Durex Green Guard

			no. Coated coate 1 67.5 112.8	esult		
Property	Unit	Requirement	•	Coated	Un- coated	Difference
WVT	ng/(Pa⋅s⋅m²)	/(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 42. Results of testing of water vapour transmission (WVT), Durex Blue Shield

			Sample no.Coatedlied167.5268.1	esult		
Property	Unit	Requirement	•	Coated	Un- coated	Difference
WVT	ng/(Pa⋅s⋅m²)	Report value of the WVT rate of the WRB in combination with the OSB applied	1	67.5	112.8	45.3
		at the maximum thickness and the OSB alone	2	68.1	131.1	63
			3	64.3	120.2	55.9
			Average	66.6	121.4	54.8

Table 43. Results of testing of water vapour transmission (WVT), Durex Dur-A-Mastic 100

				Re	sult	
Property	rty Unit Requirement		Sample no.	Coated	Un- coated	Difference
WVT	ng/($Pa \cdot s \cdot m^2$) Report value of the WVT rate of the WRB in combination with the OSB applied	1	72	90	22	
		at the maximum thickness and the OSB alone	2	70	99	29
		3	90	118	28	
			Average	77.3	102.3	25

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Table 44. Results of testing of water vapour transmission (WVT), Durex Air Stop

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

Table 45. Results of testing of accelerated weathering of WRB

			Resu	ult
Property	Unit	Requirements	Sample no	-
Accelerated weathering	-	The WRB applied over OSB must show no cracking, delamination, flaking or any deleterious	1	Pass
resistance		effects following 250 h exposure to Xenon arc	2	Pass
			3	Pass
			4	Pass
		5	Pass	
			6	Pass

Table 46. Results of testing of drainage capacity

					Result							
		Par	nel 1 to	otal (g)	Par	nel 2 to	otal (g)	Panel 3 total		tal (g)		
			Ret	tained	water	Re	tained	water	Ret			
Property	Unit	Requirement	1 h	48 h	Result	1 h	48 h	Result	1 h	48 h	Result	
Drainage capacity	g/m	The unit-retained water (based on the projected drainage area) following 1 h and 48 h of drainage period must 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 must not be less than 98% of the water mass delivered into the EIFS wall specimen	99	9.6	Pass	99	9.7	Pass	99	9.7	Pass	

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Table 47. Nail popping resistance

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

Table 48. Condensation control (1) - EIFS with Durex Quantum Select (DQS) GDDC Insulation

Property	O / I Ratio ⁽²⁾	Unit	Requirement	Result
Inboard surface temperature of the sheathing panel - Benchmark panel ⁽⁴⁾ - 50-mm-thick flat insulation - tested	0.35	°C	Report value	-8.9
Inboard surface temperature of the sheathing panel - EIFS panel ⁽⁵⁾ with one (1) vent and 50.8-mm- (2-in) thick DQS GDDC insulation - tested	0.35	°C	≥ Benchmark	-8.6
Inboard surface temperature of the sheathing panel - EIFS panel ⁽⁵⁾ with two (2) vents and 50.8-mm (2-in.) thick DQS GDDC insulation - tested	0.35	°C	≥ Benchmark	-8.6

Notes

- 1 The EIFS with Durex Quantum Select GDDC insulation incorporates grooved channels cut in the back of the boards to facilitate drainage. The drainage cavities are capped at the top of the panels. It was designed as a cladding component of the pressure equalized rain screen (PER) wall assemblies. Its application and performance are dependent on all system-specific termination details as published by the manufacturer and must form part of all applications. As such, it differs entirely from a flat panel application. The inboard surface temperature on the sheathing panel of the EIFS with Durex Quantum Select GDDC insulation was measured under laboratory conditions (by using the guarded hot box test at -18°C temperature and 6.7 m/s wind speed). Durex Quantum Select GDDC EIF system was compared with a benchmark wall assembly conforming to the requirements of Table 9.25.5.2., Ratio of Outboard to Inboard Thermal Resistance, of Division B of the NBC 2015.
- O/I Ratio: The outboard/inboard ratio of total thermal resistance outboard of the low water vapour permeance material's inner surface (i.e., OSB + Durex[®] Airstop / Durex[®] Flexcrete) to total thermal resistance inboard of low water vapour permeance material's inner surface. O/I ratio has been calculated in accordance with the calculation method outlined in Figure A-9.25.5.2., Example of a wall section showing thermal resistance inboard of a plane of low air and vapour permeance, of Division B of the NBC 2015.
- 3 Results given are at the average of the temperatures measured at the centre of cavity and at quarter (1/4) wall panel height. Wind speed applied to benchmark test panel was higher than 6.7 m/s (the specified wind speed value). This may lead to more punitive performance on the benchmark test specimen.
- 4 Benchmark wall panel is comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, CCMC-evaluated WRB/adhesive, 50-mm-thick flat EPS insulation and CCMC-evaluated base and finish coat.
- EIFS panels evaluated are comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, Durex[®] Airstop WRB, Durex[®] Flexcrete adhesive, 50.8-mm- (2-in.-) thick Durex Quantum Select GDDC insulation, Durex[®] Uniplast+Durex[®] Acrybond S basecoat and Durex[®] Marble Coat finish coat.

Table 49. Condensation control (1) - EIFS with Durex Flexlite Select (DFS) GDDC insulation

Property	O / I Ratio ⁽²⁾	Unit	Requirement	Result
Inboard surface temperature of the sheathing panel - Benchmark panel $\frac{(4)}{2}$ - 50-mm-thick flat insulation - tested	0.35	°C	Report value	-8.9
Inboard surface temperature of the sheathing panel - EIFS panel $^{(5)}$ - with one vent and 50.8-mm-(2-in) thick DFS GDDC insulation - tested	0.35	°C	≥ Benchmark	-7.3
Inboard surface temperature of the sheathing panel - EIFS panel (5) - with two vents and 50.8-mm-(2-in) thick DFS GDDC insulation - tested	0.35	°C	≥ Benchmark	-7.8

Notes

- 1 The EIFS with Durex Flexilite Select GDDC insulation incorporates grooved channels cut in the back of the boards to facilitate drainage. The drainage cavities are capped at the top of the panels. It was designed as a cladding component of the pressure equalized rain screen (PER) wall assemblies. Its application and performance are dependent on all system-specific termination details as published by the manufacturer and must form part of all applications. As such, it differs entirely from a flat panel application. The inboard surface temperature on the sheathing panel of the EIFS with Durex Flexilite Select GDDC insulation was measured under laboratory conditions (by using the guarded hot box test at -18°C temperature and 6.7 m/s wind speed). Durex Flexilite Select GDDC EIF system was compared with a benchmark wall assembly conforming to the requirements of Table 9.25.5.2. of the NBC 2015.
- O/I Ratio: The outboard/inboard ratio of total thermal resistance outboard of the low water vapour permeance material's inner surface (i.e., OSB + Durex[®] Airstop / Durex[®] Flexcrete) to total thermal resistance inboard of low water vapour permeance material's inner surface. O/I ratio has been calculated in accordance with the calculation method outlined in Figure A-9.25.5.2. of the NBC 2015.

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- Results given are at the average of the temperatures measured at the centre of cavity and at quarter (1/4) wall panel height. Wind speed applied to benchmark test panel was higher than 6.7 m/s (the specified wind speed value). This may lead to more punitive/conservative performance on the benchmark test specimen. O/I ratio has been calculated in accordance with the calculation method outlined Figure A-9.25.5.2. of the NBC 2015.
- 4 Benchmark wall panel is comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, CCMC-evaluated WRB/adhesive, 50-mm-thick flat EPS insulation and CCMC-evaluated base and finish coat.
- EIFS panels evaluated are comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, Durex[®] Airstop WRB, Durex[®] Flexcrete adhesive, 50.8-mm- (2-in.-) thick Durex Flexlite Select GDDC insulation, Durex[®] Uniplast+Durex[®]Acrybond S basecoat and Durex[®] Marble Coat finish coat.

Table 50. Tested ⁽¹⁾ effective thermal resistance (R-value) of the EIFS Wall Assemblies (panels)

Property	Unit	Requirement	Result (2)
Tested effective thermal resistance (R-value) of the benchmark EIFS panel ⁽³⁾ with 50-mm-thick flat insulation	m ^{2.} °C/W	Report value	3.77 <u>(4)</u>
Tested effective thermal resistance (R-value) of the EIFS panel ⁽⁵⁾ with 50.8-mm- (2-in) thick Durex Quantum Select GDDC insulation with one vent	m ^{2.} °C/W	Report value	3.89
Tested effective thermal resistance (R-value) of the EIFS panel ⁽⁵⁾ with 50.8-mm- (2-in) thick Durex Quantum Select GDDC insulation with two vents	m ^{2.} °C/W	Report value	3.77
Tested effective thermal resistance (R-value) of the EIFS panel ⁽⁶⁾ with 50.8-mm- (2-in) thick Durex Flexlite Select GDDC insulation with one vent	m ^{2.} °C/W	Report value	3.91
Tested effective thermal resistance (R-value) of the EIFS panel ⁽⁶⁾ with 50.8-mm- (2-in) thick Durex Flexlite Select GDDC insulation with two vents	m ^{2.} °C/W	Report value	3.61

Notes

- Effective thermal resistance (RSI-value) has been tested at 6.7 m/s wind speeds and -18°C, in accordance with Clause 9.36.2.2.(4)(b) and Sentence 9.36.2.4.(1) of the NBC 2015.
- 2 Refer to Table 9.36.2.6.-A, Effective Thermal Resistance of Above-ground Opaque Assemblies in Buildings without a Heat-Recovery Ventilator, and Table 9.36.2.6.-B, Effective Thermal Resistance of Above-ground Opaque Assemblies in Buildings with a Heat-Recovery Ventilator, of Division B of the NBC 2015 for the effective thermal resistance requirements.
- 3 Benchmark wall panel is comprised of indoor air film, 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mmthick OSB sheathing, CCMC-evaluated WRB/adhesive, 50-mm-thick flat EPS insulation and CCMC-evaluated base and finish coat.
- 4 Wind speed applied to benchmark test panel was higher than 6.7 m/s (the specified wind speed value). This may lead to a more punitive/conservative performance on the benchmark test specimen.
- <u>5</u> EIFS panels evaluated are comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, Durex[®] Airstop WRB, Durex[®] Flexcrete adhesive, 50.8-mm- (2-in.-) thick Durex Quantum Select GDDC insulation, Durex[®] Uniplast+Durex[®]Acrybond S basecoat and Durex[®] Marble Coat finish coat.

EIFS panels evaluated are comprised of 12.7-mm-thick gypsum board, 6-mil polyethylene film, R-22 batt insulation, 11.1-mm-thick OSB sheathing, Durex[®] Airstop WRB, Durex[®] Flexcrete adhesive, 50.8-mm- (2-in.-) thick Durex Flexlite Select GDDC insulation, Durex[®] Uniplast+Durex[®]Acrybond S basecoat and Durex[®] Marble Coat finish coat.

Fire testing

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 3 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, 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 FWFO7.EW17, ULC FWFO7.EW21 and ULC FWFO7.EW22, and Intertek report 12737641COQ-001 for further details on the combination of coatings/systems falling under the scope of the said listings.

Additional performance data

Please refer to <u>Appendix A</u> of this evaluation for air permeance test results in compliance with CAN/ULC-S741-08 on Durex AirStop weather resistive barrier.

Appendix A – Additional performance data

Data presented in this section is beyond the CCMC's opinion in the <u>code compliance opinion</u> section and is for information purposes only. Data published in this section has been extracted from Exova test report number 18-06-B0194 (dated March 19, 2019).

Air permeance tests in compliance with CAN/ULC-S741 have been performed on Durex AirStop weather-resistive barrier by an accredited testing agency. Results of the mentioned tests are listed below:

Table 51. Air permeance test results for Durex AirStop per CAN/ULC-S741-08 (1)

Test	CAN/ULC-S741-08 requirement	Result
Tested in accordance with CAN/ULC-S741 with five $1-m^2$ membrane specimens and measured for air permeance at a minimum of six air pressure differentials (Δ P) between 0 and 300 Pa – unconditioned (prior to UV and heat aging).	Air leakage rate at 75 Pa $\Delta P \le 0.02 \text{ L/(s·m}^2)$	0.0015 L/(s·m²)
Tested in accordance with CAN/ULC-S741 with five $1-m^2$ membrane specimens and measured for air permeance at a minimum of six air pressure differentials (ΔP) between 0 and 300 Pa – conditioned (after UV and heat aging).	Where less than 0.01 L/($s \cdot m^2$) for unconditioned specimens, the increase of the air leakage rate at 75 Pa ΔP for conditioned specimens ≤ 0.001 L/($s \cdot m^2$)	0.0018 L/(s·m²) <u>(2)</u>

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Test	CAN/ULC-S741-08 requirement	Result
		0.0003 L/(s·m²) <u>(3)</u>

Notes

1 Average membrane thickness tested is 0.58 mm.

- 2 Test result (air leakage rate) for the conditioned specimens after UV and heat aging.
- 3 Increase of the air leakage rate for conditioned specimens after UV and heat aging.

Administrative information

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Alliance of Canadian Building Official Associations (ACBOA)	ACBOA alliance
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Canadian Home Builders' Association (CHBA)	Conder Marking Ancient According Ac
	(Canadian Home Builders' Association (CHBA))
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	(Alberta Building Officials Associations (ABOA))
Saskatchewan Building Officials Association (SBOA)	(Saskatchewan Building Officials Association (SBOA))
Manitoba Building Officials Association (MBOA)	(Manitoba Building Officials Association (MBOA))
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	(Ontario Building Officials Association (OBOA))
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Code Compliance via Acceptable Solutions

If a building design (e.g. material, component, assembly or system) can be shown to meet all provisions of the applicable **acceptable solutions** in Division B (e.g. it complies with the applicable provisions of a referenced standard), it is deemed to have satisfied the objectives and functional statements linked to those provisions and thus to have complied with that part of the Code.

- National Building Code of Canada, Sentence A-1.2.1.1.(1)(a)

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Acceptable Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

CCMC's code compliance opinions

All CCMC evaluation reports are opinions of code compliance established in accordance with the National Building Code of Canada, Subsection 1.2.1. "Compliance with this Code," which requires compliance to be achieved by:

- · complying with the applicable acceptable solutions in Division B, or
- using an alternative solution that will achieve at least the minimum level of performance required by Division B in the areas defined by the objective and functional statements attributed to the applicable acceptable solutions.

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Code Compliance via Alternative Solutions

Where a design differs from the acceptable solutions in Division B, then it should be treated as an "**alternative solution**." A proponent of an alternative solution must demonstrate that the alternative solution addresses the same issues as the applicable acceptable solutions in Division B and their attributed objectives and functional statements. However, because the objectives and functional statements are entirely qualitative, demonstrating compliance with them in isolation is not possible. Therefore, Clause 1.2.1.1.(1)(b) identifies the principle that Division B establishes the quantitative performance targets that alternative solutions must meet. In many cases, these targets are not defined very precisely by the acceptable solutions [...] Nevertheless, Clause 1.2.1.1.(1)(b) makes it clear that an effort must be made to demonstrate that an alternative solution will perform as well as a design that would satisfy the applicable acceptable solutions in Division B—not "well enough" but "as well as."

- National Building Code of Canada, Sentence A-1.2.1.1.(1)(b)

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Alternative Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

CCMC's code compliance opinions

All CCMC evaluation reports are opinions of code compliance established in accordance with the National Building Code of Canada, Subsection 1.2.1. "Compliance with this Code," which requires compliance to be achieved by:

- · complying with the applicable acceptable solutions in Division B, or
- using an alternative solution that will achieve at least the minimum level of performance required by Division B in the areas defined by the objective and functional statements attributed to the applicable acceptable solutions.

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