

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

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Durex Flexlite includes: Flexlite Select, Flexlite Select MF, Flexlite Select ICF, Flexlite

**ADH, Flexlite MF** 

Durex Insulite includes: Insulite Select, Insulite Select MF, Insulite Select ICF, Insulite

**EW-17, Insulite EXT ADH** 

Durex Quantum includes: Quantum Select, Quantum Select 5.0, Quantum Select MF,

**Quantum Select ICF** 

Durex Equalite includes: Equalite Select, Equalite

Durex IBS includes: Integrated Building System, Integrated Cladding System

Durex Panelite includes: Panelite, Panelite ADH

Durex Cladlite includes: Cladlite, Cladlite ADH

#### 1. Opinion

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

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

- 1. The products comply with the requirements of the NBC 2010 and 2015 simultaneously.
- 2. See Section 4.1.2, Fire Performance, of this Report.
- 3. Conformance to Subsection 5.9.4. is limited to systems meeting, at minimum, the requirements of Clause 9.27.13.1.(1)(b) and Article 9.27.13.2. of Division B of the NBC 2015.

This opinion is based on CCMC's evaluation of the technical evidence in Section 4.1 provided by the Report Holder.

# 2. Description

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

- a water-resistive barrier (WRB)
- · an adhesive or mechanical fastener attachment
- an insulation board
- a coating system (lamina)<sup>(4)</sup>
- 4. The lamina refers to all the coats (base coats and finish coat) that are applied to the outer face of the insulation board together with the glass-fibre mesh reinforcement.

The following describes the different components of the systems:

#### 2.1 Substrate

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

# 2.2 Water-Resistive Barrier (WRB)<sup>(5)(6)</sup>

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

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

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

The products use the following coatings as a WRB:

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

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

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

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

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

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

#### 2.2.2 Roller-Applied WRB Coatings

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

#### 2.2.3 Joint, Rough Openings and Penetration Treatments

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

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

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

"Durex EIFS Tape Superstick T.M." is a 100–450-mm, self-adhering, high-performance polyester tape that wraps around rough openings and penetrations.

Note: "Durex Flexcrete," "Durex Green Guard," "Durex Blue Shield," "Durex Dur-A-Mastic 100," "Durex Ectoflex," or "Durex AirStop" WRBs are applied in combination with "Durex EIFS Tape" or "Durex EIFS Tape Superstick T.M." 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 EIFS Tape Superstick T.M.", lapping each side of the joint by not less than 50 mm.

#### 2.2.4 Self-Adhered Modified Bituminous Membrane

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

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

# 2.3 Adhesives<sup>(6)</sup>

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

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

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

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

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

#### 2.4 Mechanical Fasteners<sup>(7)</sup>

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

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

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

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

#### 2.5 Insulation

#### 2.5.1 Expanded Polystyrene (EPS)

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

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

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

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

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

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

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

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

- CAN/ULC-S701<sup>(9)</sup>, 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:
  - o As designed, when used in combustible construction,
  - o 110 mm, for the system defined in ULC Listing FWFO7. EW17, when used in noncombustible construction meeting Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015,
  - o 150 mm for the systems defined in ULC Listings FWFO7.EW21 and FWFO7. EW22, and when used in noncombustible construction meeting Clause 3.2.3.8.(1)(b) of Division B of the NBC 2015, and
  - o 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 meeting Article 3.1.5.5 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 Quantum Select 5.0 EPS/Durex Insulite Select Graphite EPS"
- Maximum board size is 600 mm × 2 440 mm for "Durex XPS"
- Average density of 16 kg/m³ for "Durex EPS/Durex Flexlite Select EPS/Durex Quantum Select EPS/Durex Insulite Select EPS" utilizing Type 1 EPS
- Average density of 22 kg/m³ for "Durex EPS/Durex Quantum EPS/Durex Select EPS/Durex Insulite Select EPS" utilizing Type 2
  EPS
- Average density of 32 kg/m³ for "Durex Quantum Select 5.0 EPS"
- Average density of 25 kg/m³ for "Durex XPS"
- Flame-spread rating of 25–500, as per CAN/ULC-S102.2-10, "Test for Surface Burning Characteristics of Building Materials and Assemblies."
- 8. The aspect of pressure equalization when using "Durex Flexlite Select EPS," "Durex Quantum Select EPS," "Durex Quantum Select 5.0 EPS," "Durex Insulite Select Graphite EPS," "Durex Equalite MW Insulation," "Durex Equalite Select MW Insulation," "Durex EPS," and "Durex XPS" is considered beyond the scope of the present evaluation; thus, it is not covered by the present technical opinion.
- 9. Conformance to CAN/ULC-S701 shall be established through having the insulation under a recognized certification program and/or having a valid CCMC Listing.

#### 2.5.2 Mineral Wool

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

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

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

- CAN/ULC S-702
- Minimum flat board thickness of 50 mm
- Maximum board thickness of 150 mm
- Maximum board size of 600 mm × 1 219 mm
- Average density of 128 kg/m<sup>3</sup>

#### 2.6 Synthetic Coating System (Lamina)

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

#### 2.6.1 Base Coat(10)

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

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

"Durex Monobase NC" is a polymer-modified adhesive and base coat supplied in 22.7-kg dry bags and mixed on-site with clean potable water (4:1 by weight, dry mix to water). "Durex Monobase NC" is noncombustible, conforming to the requirements of CAN/ULC-S114-05,

"Test for Determination of Non-Combustibility in Building Materials." When used as a base coat, "Durex Monobase NC" is applied in a continuous layer over the entire surface of the EPS/mineral wool insulation boards to a uniform dry thickness not less than 1.6 mm using a stainless steel trowel.

"Durex Uniplast" is a polymer-modified base coat supplied in 22.7-kg dry bags. It is mixed with "Durex Acrybond S," a water-based 100% acrylic polymer cement additive (4:1 by weight, dry mix to "Durex Acrybond S"). "Durex Uniplast" is noncombustible, conforming to the requirements of CAN/ULC-S114-05. It is applied with a stainless steel trowel to the entire surface of the EPS /XPS/mineral wool insulation to a uniform dry thickness not less than 1.6 mm per coat.

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

## 2.6.2 Reinforcing Mesh

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

The reinforcing mesh is available in five different grades, (11) represented in descending order of strength:

- "Durex Extreme Impact Resistant Mesh (21.0 oz)" (High Impact), minimum 694 g/m<sup>2</sup>,
- "Durex Ultra Impact Mesh (15.0 oz)" (High Impact), minimum 508 g/m<sup>2</sup>,
- "Durex High Impact Mesh (11.0 oz)" (Intermediate Impact), minimum 349 g/m<sup>2</sup>,
- "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/m<sup>2</sup>, and
- "Durex Standard Mesh (4.3 oz)," (Standard Mesh), minimum 142.5 g/m<sup>2</sup>.
- 11. Higher grade meshes are intended to be used in areas requiring high impact resistance. All five grades of reinforcing mesh as noted above may be used in conjunction with "Durex Insulite/Durex Flexlite/Durex Quantum/Durex Equalite/Durex IBS/Durex Panelite/Durex Cladlite" systems.

#### 2.6.3 Primer

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

#### 2.6.4 Finish Coat

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

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

• "Trim Spray" (2.0 mm)

Products in the Products in the "Durex Kolor Gard" 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:

- "Kolor Gard Graffiato" (2.0 mm)
- "Kolor Gard Marble Coat" (1.5 mm)
- "Kolor Gard Sandex" (1.25 mm)
- "Kolor Gard Stucco Spray" (1.25 mm)
- "Kolor Gard Marble Coat" (1.0 mm)
- "Kolor Gard Marble Coat (1.8 mm)
- "Kolor Gard Venician" (2.0 mm)
- "Kolor Gard Pebble Float" (1.5 mm)
- "Kolor Gard 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 Premium 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 Artisan 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"
- "Dur-a-brick"
- "Trowel Grade Stucco"
- "Pull-off"
- "Aggrex"

Table 2.0(a) "Durex Quantum" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
	Ouantum	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 Seam Tape + Durex Joint Guard Durex Barrier Seam Tape	Durex Flexcrete Durex Monobase	Durex Quantum Select EPS Type 1 (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape Durex EIFS
	Select	Plywood/OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	+ Durex Green Guard  Durex Barrier Seam Tape + Durex Blue Shield	Durex VCA 3.0	Durex Quantum Select EPS Type 2 (GDDC)	Durex Monobase  Durex Flexcrete	Durex Dur-X-Cell 100	Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Tape Superstick T.M.
Durex		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 Seam Tape + Durex Joint Guard Durex Barrier	Durex Flexcrete Durex Monobase	Durex Quantum Select 5.0 EPS Type 3 (GDDC)	Durex Uniplast	Durex Brush Coat	Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape
Quantum	Quantum Select 5.0	Plywood/OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Blue Shield	Durex VCA 3.0	Durex Quantum Select 5.0 EPS Type 1 Graphite (GDDC)	Durex Acrybond S  Durex Monobase  Durex Flexcrete	Brush Coat  Durex Dur-X-Cell 100	Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Superstick T.M.
	Durex Quantum Select MF	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Flexseal Membrane	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 Kolor Gard  Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M. Durex FlexSeal Membrane
	Durex Quantum	ICF	Durex Flexcrete	n/a	Durex Flexcrete	Durex Quantum Select EPS Type 1	Durex Uniplast + Acrybond	Durex Brush Coat	Durex Architectural	Durex EIFS Tape

Select ICF	Durex Ectoflex		(GDDC)	S		Coatings	
		Durex			Durex Dur-X-	Durex Kolor	Durex EIFS
		Monobase	Durex Quantum	Durex Monobase	Cell 100	Gard	Tape
			Select EPS Type 2				Superstick
		Durex VCA	(GDDC)	Durex Flexcrete		Durex	T.M.
		3.0				Architectural	
						Coatings FX	
						Durex Artisan	
						Series Coatings	
						Durex Premium	
						Series Coatings	

Table 2.0(b) "Durex Insulite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
	Durex Insulite 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 Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green	Durex Flexcrete Durex Monobase	EPS Type 1 EPS Type 2	Durex Uniplast + Durex Acrybond S Durex Flexcrete	Durex Brush Coat Durex	Durex Architectural Coatings Durex Kolor Gard  Durex Architectural	Durex EIFS Tape Durex EIFS Tape Superstick
	2,17	Plywood / OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	Guard  Durex Barrier Seam Tape + Durex Blue Shield	Durex VCA 3.0	El 6 Type 2	Durex Monobase	Dur-X-Cell 100	Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	T.M.
Durex Insulite	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 Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Barrier Seam Tape + Durex Blue Shield	Durex Flexcrete Durex Monobase Durex VCA 3.0	XPS Type 4	Durex Uniplast + Durex Acrybond S Durex Flexcrete Durex Monobase	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Kolor Gard  Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M.
	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 Barrier Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard	Durex Flexcrete Durex Monobase	Insulite EPS Type 1 Graphite (GDDC) Insulite EPS Type	Durex Uniplast + Durex Acrybond S Durex Flexcrete	Durex Brush Coat	Durex Architectural Coatings Durex Kolor Gard  Durex Architectural Coatings FX	Durex EIFS Tape Durex EIFS Tape
		Plywood/OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	Durex Barrier Seam Tape + Durex Blue Shield	Durex VCA 3.0	2 Graphite (GDDC)	Durex Monobase	Dur-X-Cell 100	Durex Artisan Series Coatings Durex Premium Series Coatings	Superstick T.M.
	Durex Insulite Select MF	Concrete, masonry, glass mat, cement	Durex Flexseal Membrane	n/a	Durex Mechanical Fasteners	Insulite EPS Type 1 Graphite (GDDC)	Durex Uniplast + Durex Acrybond S	Durex Brush Coat	Durex Architectural Coatings	Durex EIFS Tape

board,		Durex Flexcrete	Durex	Durex Kolor	Durex EIFS
plywood/ OSB	Insulite EPS Type		Dur-X-Cell 100	Gard	Tape
	2 Graphite	Durex Monobase			Superstick
	(GDDC)			Durex Architectural Coatings FX	T.M. Durex
				Durex Artisan Series Coatings	FlexSeal Membrane
				Durex Premium Series Coatings	

Table 2.0(c) "Durex Flexlite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/Me chanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
		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 Seam Tape + Durex Joint Guard Durex Barrier	Durex Flexcrete		Durex Flexcrete	Durex	Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape
	Flexlite ADH	Plywood/OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Blue Shield	Durex Monobase Durex VCA 3.0	EPS Type 1 EPS Type 2	Durex Monobase  Durex Uniplast  +  Durex Acrybond S	Brush Coat  Durex Dur-X-Cell 100	Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape Superstick T.M.
Durex Flexlite	Flexlite MF	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Flexseal Membrane	NA	Durex Mechanical Fasteners	EPS Type 1 EPS Type 2	Durex Flexcrete  Durex Monobase  Durex Uniplast  +  Durex Acrybond S	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Kolor Gard  Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape  Durex EIFS Tape  Tape Superstick T.M.  Durex FlexSeal Membrane
		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 Seam Tape + Durex Joint Guard	Durex Flexcrete Durex	Flexlite EPS	Durex Flexcrete	Durex Brush Coat	Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape
	Flexlite Select	Plywood/OSB	Durex Green Guard Durex Blue Shield Durex Dur-A-Mastic 100 Durex AirStop	Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Blue	Monobase  Durex VCA 3.0	Type 1 (GDDC)  Flexlite EPS Type 2 (GDDC)	Durex Monobase  Durex Uniplast  +  Durex Acrybond S	Durex Dur-X-Cell 100	Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape Superstick T.M.

			Shield  Durex Barrier						
Flexlite elect MF	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	Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Blue Shield	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 Kolor Gard  Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium Series Coatings	Durex EIFS Tape  Durex EIFS Tape Superstick T.M.  Durex FlexSeal Membrane

Table 2.0(d) "Durex Equalite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex Equalite	Durex Equalite	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Fleseal 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 Kolor Gard  Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M. Durex FlexSeal Membrane
	Durex Equalite Select	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex FlexSeal Membrane	n/a	Durex Mechanical Fasteners	Durex Equalite Select MW Insulation (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase NC	Durex Brush Coat Durex Dur-X-Cell 100	Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape Durex EIFS Tape

				Durex Architectural Coatings FX Durex Artisan Series Coatings Durex Premium	Superstick T.M. Durex FlexSeal Membrane
				Durex Premium Series Coatings	

Table 2.0(e) "Durex IBS Panel" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
Durex IBS	Durex Integrated Building System	Glass mat, cement board, plywood/OSB	Durex Green Guard  Durex Blue Shield  Durex Dur-A-Mastic 100  Durex AirStop	Durex Barrier Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Blue Shield	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 Kolor Gard  Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M.
Panel	Durex Integrated Cladding System	Glass mat, cement board, plywood/OSB	Durex Green Guard  Durex Blue Shield  Durex Dur-A-Mastic 100  Durex AirStop	Durex Barrier Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Burex Blue Shield	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 Kolor Gard  Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M.

Table 2.0(f) "Durex Panelite" Components

System Family	System	Substrate	WRB	Joint Treatment	Adhesives/ Mechanical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
	Durex Panelite	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Flexseal Membrane	Durex Flexseal Membrane	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 Kolor Gard  Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M. Durex FlexSeal Membrane
Durex Panelite	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 Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape + Durex Burex Blue Shield	Durex Flexcrete Durex Monobase Durex VCA 3.0	Durex Quantum Select EPS (GDDC) with internal Steel Reinforcement	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings  Durex Architectural Coatings FX  Durex Artisan Series Coatings  Durex Premium Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M.

Table 2.0(g) "Durex Cladlite" Components

System Family	System	Cladlite" Compo Substrate	WRB	Joint Treatment	Adhesives/Mech anical Fasteners	Insulation	Base coats	Primers	Finish Coats	Transition Membranes
·									Durex Architectural Coatings Durex Kolor Gard	Durex EIFS Tape
	Durex Cladlite	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Flexseal Membrane	Durex Flexseal Membrane	Durex Mechanical Fasteners	Durex Flexlite Select EPS (GDDC)	Durex Uniplast + Durex Acrybond S Durex Monobase	Durex Brush Coat	Durex Architectural Coatings FX Durex Artisan Series Coatings	Durex EIFS Tape Superstick T.M.  Durex FlexSeal Membrane
Durex									Durex Premium Series Coatings	
Durex Cladlite	Durex Cladlite ADH	Concrete, masonry, glass mat, cement board, plywood/OSB	Durex Flexcrete  Durex Green Guard  Durex Blue Shield  Durex Dur-A-Mastic 100  Durex Ectoflex  Durex AirStop	Durex Barrier Seam Tape + Durex Joint Guard  Durex Barrier Seam Tape + Durex Green Guard  Durex Barrier Seam Tape	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 Kolor Gard  Durex Architectural Coatings FX  Durex Artisan Series Coatings	Durex EIFS Tape Durex EIFS Tape Superstick T.M.
				+ Durex Blue Shield					Durex Premium Series Coatings	

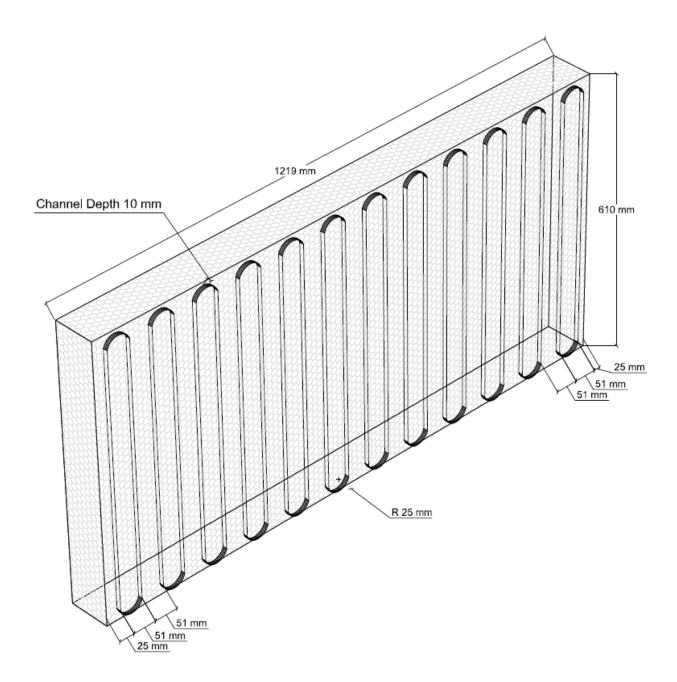


Figure 1. "Durex Quantum Select EPS" and "Durex Quantum Select 5.0 EPS" insulation drainage board

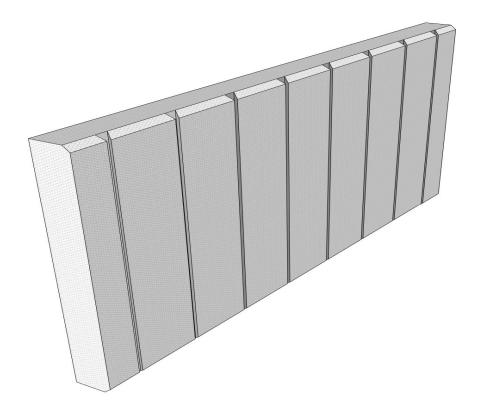


Figure 2. "Durex Flexlite Select EPS" Board (GDDC) and "Durex Insulite Select Graphite EPS" Board (GDDC) (side view)

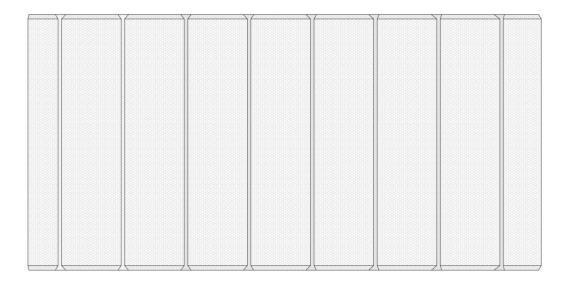


Figure 3. "Durex Flexlite Select EPS" Board (GDDC) and "Durex Insulite Select Graphite EPS" Board (GDDC) (front view)

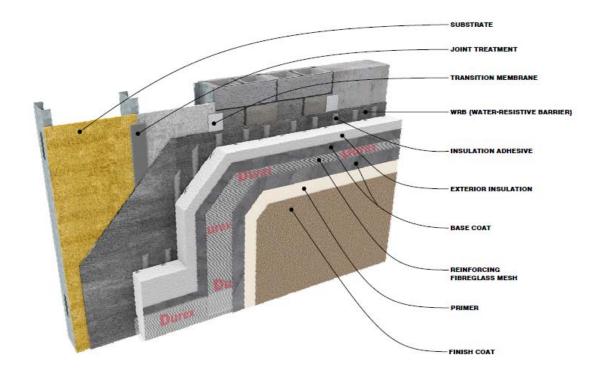


Figure 4. "Durex Quantum Select" over non-wood applications

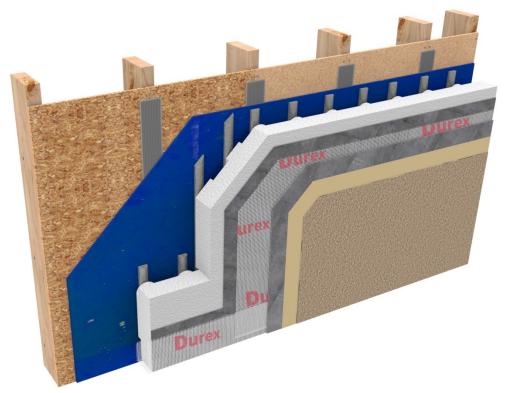


Figure 5. "Durex Quantum Select" over wood applications

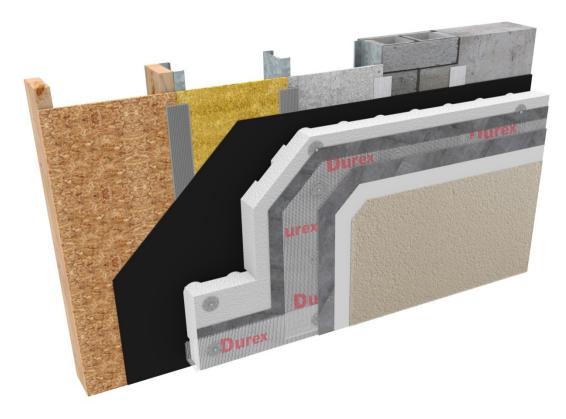


Figure 6. "Durex Quantum Select MF" over different substrate applications

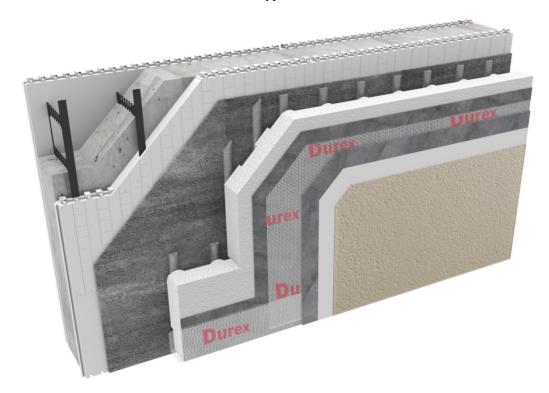


Figure 7. "Durex Quantum Select ICF" applications over insulated concrete forms

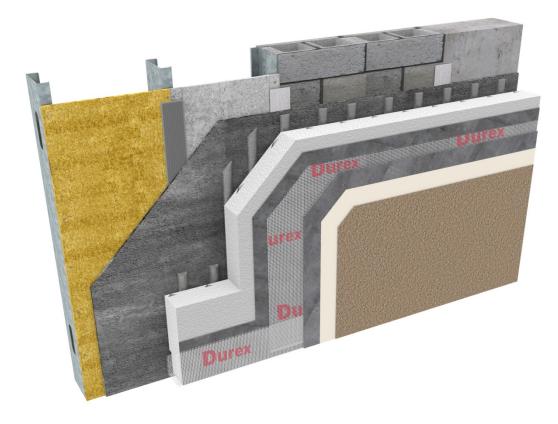


Figure 8. "Durex Flexlite Select" over non-wood applications

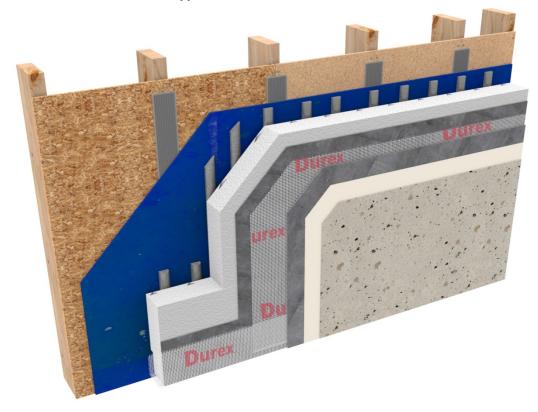


Figure 9. "Durex Flexlite Select" over wood applications

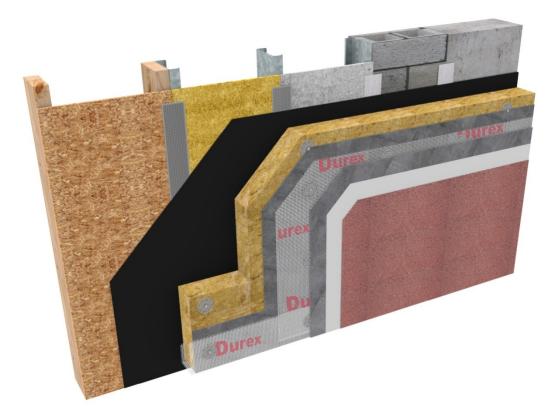


Figure 10. "Durex Equalite" over different substrate applications

#### 3. Conditions and Limitations

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

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

- The possibility of moisture accumulation within the wall construction is mainly a function of: 1) the ability of the wall assembly to deflect bulk water entry, 2) the physical properties of the cladding being installed and its impact on the thermal, air leakage and vapour diffusion characteristics of the existing wall, all of which must be in accordance with Appendix Note A-5.1.2.1.(1), Application (Environmental Separation), of Division B of the NBC 2015.
- When used in new construction, the design of the inboard/outboard insulation must be in accordance with the requirements of Section 9.25., Heat Transfer, Air Leakage and Condensation Control, of Division B of the NBC 2015.
- In retrofit construction, adding thermal insulation to existing exterior walls will increase the thermal efficiency and airtightness of the wall. Deficiencies in flashing and other elements in the building assembly, including mechanical systems, may result in the detrimental effects of moisture accumulation highlighted in Appendix Note A-9.25.2.4.(3), Loose-Fill Insulation in Existing Wood-Frame Walls, of Division B of the NBC 2015. As a result, existing exterior walls intended to be retrofitted with EIFS must meet the requirements of the NBC 2015 for heat transfer, air leakage and condensation control.
- The products can provide additional thermal insulation to the wall assembly in retrofit construction with no detrimental effects if properly installed with knowledge of the existing wall configuration and performance.
- The products alone may not provide the full amount of the required wall insulation. The thermal resistance of the wall system must conform to the condensation resistance and energy requirements of the applicable building code. The wall system may have to conform to the National Energy Code for Buildings 2015 at minimum to meet Canada Mortgage and Housing Corporation (CMHC) technical requirements.
- The polystyrene thermal insulation must be in conformance with the requirements of CAN/ULC-S701.
- The polystyrene thermal insulation boards must be cut from moulded blocks manufactured using 100% virgin raw materials.
- The EPS Graphite is limited to products manufactured by PLASTI-FAB LTD and falling under 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;
  - o "Durex Standard Mesh" having a minimum weight of:
    - 142.5 g/m<sup>2</sup> 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 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-001for further details on the combination of coatings/systems falling under the scope of said listings.
- When used in noncombustible construction, the polystyrene insulation shall be protected from the inside of the building in accordance with the applicable sentences of Article 3.1.5.15. of Division B of the NBC 2015.
- When used in combustible construction, the polystyrene insulation must be protected from the inside of the building in accordance with Clauses 3.1.4.2.(1)(c), Protection of Foamed Plastics, and 9.10.17.10.(1)(c), Protection of Foamed Plastics, of Division B of the NBC 2015.
- The systems should be kept at least 50 mm, or as required in building regulations and safety codes, from heat-emitting devices, such as recessed light fixtures and chimneys.
- The requirements of the NBC 2015 regarding fire blocks shall be implemented.

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

## 4. Technical Evidence

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

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

## 4.1.1 Performance Requirements

**Table 4.1.1.1 Results of Testing of Ash Content** 

	Property		Unit	Requirement	Result
	Adhesive	<b>Durex Monobase</b>			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	% Report value		31.3
Ash content	WRB	Durex Blue Shield		Report value	9.9
	WRB	Durex Dur-A-Mastic 100			38.0
	WRB	<b>Durex Ectoflex</b>			0.2
	WRB	<b>Durex Ectoflex B</b>			98.5
	WRB	<b>Durex Flexcrete</b>			71.5
	WRB	Durex Flexcrete B			98.5
	WRB	Durex Green Guard			9.9

Table 4.1.1.2 Results of Infrared Analysis Testing

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

# Note to Tables 4.1.1.1 and 4.1.1.2:

<sup>1. &</sup>quot;Finish coat" refers to "Durex Architectural Coatings," "Durex Architectural Coatings FX," "Durex Premium Series Coatings," and "Durex Artisan Finish Series."

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

	Property			Requirement No detachment at bonding plane @	Result
		dry state		0.25	-
	Durex Flexcrete to cement board	2-h drying		0.08	0.51
	coment boar a	7-d drying		0.25	0.65
		dry state		0.25	-
	Durex Flexcrete to glass mat gypsum	2-h drying		0.08	0.13
	giass mat gypsum	7-d drying		0.25	0.38
	Durex Green Guard/	dry state		0.25	0.53
	Durex Blue Shield to	2-h drying		0.08	0.55
	concrete	7-d drying		0.25	0.67
	Durex Green Guard/	dry state		0.25	0.53
	<b>Durex Blue Shield to</b>	2-h drying		0.08	0.55
	glass mat gypsum	7-d drying		0.25	0.67
	Durex Ectoflex to concrete	dry state		0.25	1.65
		2-h drying		0.08	0.87
		7-d drying		0.25	1.63
	Durex Ectoflex to cement board	dry state	L (D	0.25	0.58
		2-h drying		0.08	0.20
		7-d drying		0.25	0.50
dhesion bond	Durex Ectoflex to glass mat gypsum	dry state	MPa	0.25	0.32
		2-h drying		0.08	0.12
	giass mat gypsum	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
	cement board	7-d drying		0.25	0.38
		dry state		0.25	1.85
	Durex AirStop to concrete	2-h drying		0.08	1.30
	Contrett	7-d drying		0.25	1.33
		dry state		0.25	0.44
	Durex AirStop to glass mat gypsum	2-h drying		0.08	0.19
	Simos mat Sypsum	7-d drying		0.25	0.30
		dry state		0.25	0.49
	Durex Dur-A-Mastic 100 to cement board	2-h drying		0.08	0.22
	to tement board	7-d drying		0.25	0.35
		dry state		0.25	1.70
	Durex Dur-A-Mastic 100 to concrete	2-h drying		0.08	0.72
	to concrete	7-d drying		0.25	1.07

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

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

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

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

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

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

	Property		Unit	Requirement  No detachment at bonding plane (a)	Result
		dry state		0.08	0.31
	Durex Flexcrete to EPS Type 1	2-h drying		0.08	0.27
	E15 Type 1	7-d drying		0.08	0.28
		dry state		0.08	0.49
	Durex Flexcrete to EPS Type 3	2-h drying		0.08	0.32
	E15 Type 5	7-d drying		0.08	0.47
		dry state		0.08	0.11
	Durex Flexcrete to EPS Graphite	2-h drying		0.08	0.09
	210 Graphite	7-d drying		0.08	0.10
		dry state		0.08	0.31
	Durex VCA 3.0 to EPS Type 1	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
dhesion bond		2-h drying	MPa	0.08	0.32
	E15 Type 5	7-d drying		0.08	0.47
	D. WCA 2.0.4	dry state		0.08	0.11
	Durex VCA 3.0 to EPS Graphite	2-h drying		0.08	0.09
	<b>r</b>	7-d drying		0.08	0.10
	D 15 1	dry state		0.08	0.30
	Durex Monobase to EPS Type 1	2-h drying		0.08	0.25
	V 1	7-d drying		0.08	0.31
	Daniel May 1	dry state		0.08	0.32
	Durex Monobase to EPS Type 3	2-h drying		0.08	0.20
	71	7-d drying		0.08	0.32
	D. M. I.	dry state		0.08	0.09
	Durex Monobase to EPS Graphite	2-h drying		0.08	0.11
		7-d drying		0.08	0.10

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

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

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

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

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

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

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

Property		Unit	Requirement	Result	
	<b>Durex Flexcrete</b>	2.5 mm wet			276
	Durex Green Guard	1 mm wet		Report value	48
	Durex Green Guaru	1.5 mm wet	ng/(Pa·s·m²)		11
	Durex Blue Shield	1 mm wet			48
WVT of WRB	Durex blue Silielu	1.5 mm wet			11
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Durex Dur-A-	1.5 mm wet			248
	Mastic 100	2.5 mm wet			216
	Dunay Estaflay	1.5 mm wet 1 coat			90
	<b>Durex Ectoflex</b>	1.5 mm wet 2 coat			77

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

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

Table 4.1.1.9 Results of Testing of Water Absorption of Base Coat

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

#### **Note to Table 4.1.1.9:**

1. Extra information provided by the proponent

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

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

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

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

Table 4.1.1.12 Results of Testing of Mildew and Fungus Resistance

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

**Table 4.1.1.13 Results of Testing of Accelerated Weathering Resistance** 

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

Table 4.1.1.14 Results of Testing of Salt-spray Resistance

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

Table 4.1.1.15(a) Results of Testing of Durability Under Environmental Cyclic Conditions<sup>(1)</sup>

Property	Unit	Requir	ement	Results
	L	D. A	introduced	13.5
Preconditioning (drainage evaluation)		Report water quantity	drained	4.36
			retained	9.14
Environmental cycling (60 cycles) <sup>(1), (2)</sup>	No unit	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat		Pass
Reduction in adhesive bond strength	MPa	0.08		0.15 <sup>(3)</sup> 0.15 <sup>(4)</sup>

## Notes to Table 4.1.1.15(a):

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

Table 4.1.1.15(b) Results of Testing of Durability Under Environmental Cyclic Conditions<sup>(1)</sup>

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

# Notes to Table 4.1.1.15(b):

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

Table 4.1.1.15(c) Results of Testing of Durability Under Environmental Cyclic Conditions<sup>(1)</sup>

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

#### Notes to Table 4.1.1.15(c):

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

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

Property		Unit	Daguinamant	Result	
		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 <sup>(2)</sup>		46	46	26
	30-day soak		48	48	36
Residual strength after	60-day soak	N/mm	42	42	36
	90-day soak		37	37	37

# Notes to Table 4.1.1.16(a):

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

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

Godain)					
Property		Unit	Requirement	Result	
Ash content		%	Report value	14	1.7
Mass per unit area		g/m <sup>2</sup>	Report value	14	40
Weight of glass		g/m <sup>2</sup>	Report value	12	6.0
Tensile strength		N/mm		Weft	Warp
Initial tensile strength	Initial tensile strength		≥ 35	37.2	40.3
Loss of tensile strength after	28-day 3 ion soak	%	≤ 50	17.7	7.3
Residual tensile strength after	28-day 3 ion soak	N/mm	≥ 20	30.6	37.3
	initial			3.3	4.1
Elongation @ break	after 28-day 3 ion soak	%	Report value	2.8	3.8

Table 4.1.1.17(a) Results of Testing of Impact Resistance<sup>(1)</sup>

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

## Note to Table 4.1.1.17(a):

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

Table 4.1.1.17(b) Results of Testing of Impact Resistance<sup>(1)</sup>

		Property	Unit	Requirement	Result
Impact resistance  10 J  Durex Uniplast Acrybond-S/ ADFORS Saint-Gobain 6 oz. mesh/ Durex Architectural Coatings Finish  Durex Flexcrete/ 190 g/m² mesh/ Durex Architectural Coatings Finish	No	6/10 free-fall drops shall show no perforation (broken mesh)	10/10 Pass		
	units	6/10 free-fall drops shall show no cracks	8/10 Pass		

#### Note to Table 4.1.1.17(b):

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

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

1 abic 4.1.1.10	Sustai		Cycl		Gust Press	Test	<b>Deflection Test</b>		
Reference Wind Pressure (kPa)	P <sub>1</sub> , P' <sub>1</sub>	(Pa)	P <sub>2</sub> , P' <sub>2</sub>	P <sub>2</sub> , P' <sub>2</sub> (Pa)		P <sub>3</sub> , P' <sub>3</sub> (Pa) Test Pressure P <sub>3</sub> , P' <sub>3</sub> (Pa)		Midspan	Maximum Net Deflections nm)
(KI a)					2.18 x l	r <sub>1</sub> , r <sub>1</sub>	2.18 x P <sub>1</sub> , P' <sub>1</sub>	Stud Height 3 050 mm	Sheathing Span 406 mm
Q <sub>50</sub> < 0.45	± 450	Pass	± 660	Pass	± 980	Dogg	+ 980	5.7	0.1
Q30 × 0.43	± 430	rass	= 000	rass	± 960	980 Pass	-980	-5.3	-0.1
Q <sub>50</sub> < 0.55	± 550	D	± 800	D	1 200	D	+1 200	6.9	0.1
Q50 × 0.55	± 330	Pass	± 800	Pass	± 1 200   Pass	-1 200	-6.6	-0.1	
Q <sub>50</sub> < 65	1.650	D	1.050	D	. 1 410	1 110 5	+1 410	8.2	0.1
Q50 < 03	± 650	Pass	± 950	Pass	± 1 410	Pass	-1 410	-7.7	-0.1
0.0 < 75	. 750	Ъ	. 1 000	D	. 1 (20	D	+1 630	9.4	0.1
$Q_{50} < 75$	± 750	Pass	± 1 090	Pass	± 1 630	Pass	-1 630	-8.9	-0.1
Q <sub>50</sub> < 85	1.050	D	1 240	D	1 050	D	+1 850	10.7	0.1
Q50 < 83	± 850	Pass	± 1 240	Pass	± 1 850	Pass	-1 850	-10.1	-0.1
0.50 < 1.00	. 1 000	Ъ	1 1 460	D	. 2 100	D	+2 180	12.6	0.2
$Q_{50} < 1.00$	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	-2 180	-11.9	-0.2
M		T /100	1 - 614: -	(4.	1 C-:1	-)	+2 920	16.0	Not applicable
Maximum test	pressure (a)	L/180 C	ieffection	(no stru	cturai tailur	e)	-3 096	-3 096 Not ap	
I III4: 4 4	1 44						+3 155	P	ass
Ultimate struct	urai test pre	essure					-3 155	Sheathing separat	ion from steel studs

#### Notes to Table 4.1.1.18(a):

- The chosen system for the Wind Load Resistance test was based on "Durex Quantum Select" as the worst-case scenario (flat EPS are considered as best-case scenario in comparison with GDDC, thus systems with flat EPS are expected to have equal or higher wind load resistance pressures).
- Wall assembly specimen of 3 048 mm  $\times$  3 124 mm, 18-ga steel stud @ 406 mm c/c with 13 mm-thick glass-fibre-faced gypsum sheathing mechanically fastened to steel studs with 32-mm-long self-drilling screws @ 300 mm c/c
- "Durex Flexcrete" trowel-applied onto the sheathing substrate, "Durex Flexcrete" as an adhesive/base coat and "Durex Architectural Coatings" as a finish coat
- 600 mm × 1200 mm, 50 mm-thick expanded polystyrene insulation adhered to the substrate using "Durex Flexcrete" trowel-applied adhesive/base coat
- "Durex Flexcrete" base coat embedding 142 g/m<sup>2</sup> reinforcing mesh

Table 4.1.1.18(b) Results of Testing of Wind Load Resistance<sup>(1)</sup> of "Durex Quantum Select MF"

	Sustai	ned	Cycl	ing	Gu	st		<b>Deflection To</b>	est
Reference Wind Pressure	$P_1, P'_1$	(Da)	P <sub>2</sub> , P' <sub>2</sub>	(Da)	P <sub>3</sub> , P' <sub>3</sub>	(Pa)	Test Pressure	Measured Maximum Net Midspar Deflections (mm)	
(kPa)	F <sub>1</sub> , F <sub>1</sub>	(га)	F <sub>2</sub> , F <sub>2</sub>	(га)	Г3, Г 3	(га)	P <sub>3</sub> , P' <sub>3</sub> (Pa) 2.18 x P <sub>1</sub> , P' <sub>1</sub>	Stud Height 3 050 mm	Sheathing Span 406 mm
Q <sub>50</sub> < 0.45	± 450	Pass	± 660	Pass	± 980	Pass	+ 980	5.2	1.4
Q50 × 0.43	± 430	rass	± 000	rass	± 960	Pass	-980	-6.0	-1.4
Q <sub>50</sub> < 0.55	1.550	Dogg	1 800	Dogg	1 200	Daga	+1 200	6.4	1.7
Q50 ~ 0.55	± 550	Pass	± 800	Pass	± 1 200	± 1 200   Pass	-1 200	-7.3	-1.7
Q <sub>50</sub> < 0.65	1.650	D	. 050	D.	. 1 410	D	+1 410	7.5	2.0
Q50 < 0.03	± 650	Pass	± 950	Pass	± 1 410	Pass	-1 410	-8.6	-2.0
0 < 75	. 750	ъ	. 1 000	00 D	. 1 (20	ъ	+1 630	8.6	2.3
$Q_{50} < 75$	± 750	Pass	± 1 090	Pass	± 1 630	Pass	-1 630	-9.9	-2.3
0 < 95	. 050	ъ	. 1 240	ъ	. 1.050	ъ	+1 850	9.8	2.6
Q <sub>50</sub> < 85	± 850	Pass	± 1 240	Pass	± 1 850	Pass	-1 850	-11.3	-2.6
0 < 1.00	. 1 000	ъ	. 1 460	ъ	. 2 100	Ъ	+2 180	11.6	3.1
$Q_{50} < 1.00$	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	-2 180	-13.3	-3.1
Maximum test pressure @ L/180 deflection (no structural failure)		+3 187	16.0	31 1 11					
Maximum test	pressure @	L/180 (	tetlection (	(no stru	ctural failur	e)	-2 770	16.9 Not app	
п.:	1						+3 250		Pass
Jitimate struct	mate structural test pressure			-3 215	Buckling of steel studs				

# Note to Table 4.1.1.18(b):

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

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

	Sustai	ned	Cycl	ing	Gus	st		<b>Deflection To</b>	est			
Reference Wind Pressure	D D'	(Da)	D D'	(Da)	D D'	( <b>D</b> a)	Test Pressure	Measured Maximum Net Midspan Deflections (mm)				
(kPa)	P <sub>1</sub> , P' <sub>1</sub>	(Ра)	P <sub>2</sub> , P' <sub>2</sub>	(Pa)	P <sub>3</sub> , P' <sub>3</sub>	(Pa)	P <sub>3</sub> , P' <sub>3</sub> (Pa) 2.18 x P <sub>1</sub> , P' <sub>1</sub>	Stud Height 3 050 mm	Sheathing Span 406 mm			
Q <sub>50</sub> < 0.45	± 450	Pass	± 660	Pass	± 980	Pass	+ 980	6.4	1.3			
Q50 × 0.43	± 430	rass	± 000	rass	± 980	Pass	-980	-6.7	-1.6			
Q <sub>50</sub> < 0.55	1.550	Dogg	1 800	Dogg	. 1 200 B	+1 200	7.9	1.6				
Q50 ~ 0.55	± 550	Pass	± 800	Pass	± 1 200	Pass	-1 200	-8.2	-2.0			
Q <sub>50</sub> < 65		D	. 050	Dogg	1 110	1 410 D	Dog 1 410 D	Dags + 1 410	410 Page	+1 410	9.3	1.9
Q50 < 03	± 650	Pass	± 950	Pass	± 1 410	1 410 Pass	-1 410	-9.6	-2.3			
0-0 < 75	± 750	D	. 1 000	D	. 1 (20	D	+1 630	10.7	2.2			
$Q_{50} < 75$	± 750	Pass	± 1 090	Pass	± 1 630	Pass	-1 630	-11.1	-2.7			
0-0 < 95	. 050	D	1 240	D	. 1.050	D	+1 850	12.2	2.5			
Q <sub>50</sub> < 85	± 850	Pass	± 1 240	Pass	± 1 850	Pass	-1 850	-12.6	-3.1			
0 < 1.00	. 1 000	ъ	. 1 460	ъ	. 2 100	D.	+2 180	14.3	3.0			
$Q_{50} < 1.00$	± 1 000	Pass	± 1 460	Pass	± 2 180	Pass	-2 180	-14.9	-3.6			
Maximum test pressure @ L/180 deflection (no structural failure)			2 579	16.0	NI ( 1' 11							
viaximum test	pressure @	L/180 (	ieilection (	(no stru	ctural failur	e)	-2 473	16.9	Not applicable			
The second	1						2 502		Pass			
Ultimate structural test pressure				-3 956	Steel studs buckled under pressure							

# Note to Table 4.1.1.18(c):

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

# **Applications over Wood Substrates (Plywood/OSB)**

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

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

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

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

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

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

# Note to Table 4.1.1.20(a):

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

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

			Result  Joint Width		
Property	Unit	Requirement <sup>(1)</sup>			
			2-mm	4-mm	
Joint disruption resistance		The WRB at joints on 2 assemblies shall show no cracking, delaminating or any other deleterious effects at a transverse bending of L/180			
Joint extension @ L/180			0.12	0.17	Pass
Joint extension @ L/360	mm		0.09	0.11	1 455
Joint extension @ L/720		Donort volvo	0.05	0.06	
Applied load @ L/180		Report value	5.82	5.85	
Applied load @ L/360	kN		2.93	2.94	
Applied load @ L/720			1.44	1.47	

# Note to Table 4.1.1.20(b):

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

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

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

## Note to Table 4.1.1.20(c):

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

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

Property	Unit	Requirement	Results	
	kg/m²·s		Sample No.	
		Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of 2 × 10 <sup>-7</sup> kg/m <sup>2</sup> ·s	1	$1.39 \times 10^{-7}$
Joint relaxation			2	1.02 × 10 <sup>-7</sup>
resistance			3	1.31 × 10 <sup>-7</sup>
			4	$0.64 \times 10^{-7}$
			5	1.18 × 10 <sup>-7</sup>

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

Property	Unit	Requirement	Results	
Joint relaxation	kg/m²·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of 2 × 10 <sup>-7</sup> kg/m <sup>2</sup> ·s	Sample No.	
			1	1.39 × 10 <sup>-7</sup>
			2	1.02 × 10 <sup>-7</sup>
resistance			3	1.31 × 10 <sup>-7</sup>
			4	0.64 × 10 <sup>-7</sup>
			5	1.18 × 10 <sup>-7</sup>

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

Property	Unit	Requirement	Results	
	kg/m²·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average WTR of $\leq 2 \times 10^{-7}  \text{kg/m}^2 \cdot \text{s}$	Sample No.	
			1	2 × 10 <sup>-7</sup>
Joint relaxation			2	2 × 10 <sup>-7</sup>
resistance			3	2 × 10 <sup>-7</sup>
			4	2 × 10 <sup>-7</sup>
			5	2 × 10 <sup>-7</sup>

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

Property	Unit	Requirement	Results	
			Sample No.	
	kg/m²·s	Five WRB-coated OSB specimens subject to 1.3 mm extension following exposure to fifteen 24-hr environmental cycles shall have a max. average Water Transmission Rate (WTR) of 2 x 10 <sup>-7</sup> kg/m <sup>2</sup> ·s	1	0.96 x 10 <sup>-7</sup>
WTR			2	1.52 x 10 <sup>-7</sup>
WIK			3	0.80 x 10 <sup>-7</sup>
			4	0.91 x 10 <sup>-7</sup>
			5	0.86 x 10 <sup>-7</sup>

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

Property	Unit	Requirement	,,	Results
			Sample No.	
	kg/m²·s	Five WRB-coated OSB specimens subject to 1.3 mm	1	0.96 x 10 <sup>-7</sup>
WTD		extension following exposure to fifteen 24-hr environmental cycles shall have a max. average Water Transmission Rate (WTR) of 2 x 10 <sup>-7</sup> kg/m <sup>2</sup> ·s	2	1.52 x 10 <sup>-7</sup>
WTR			3	0.80 x 10 <sup>-7</sup>
			4	0.91 x 10 <sup>-7</sup>
			5	0.86 x 10 <sup>-7</sup>

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

Property	Units	Requirement	Results				
WVT ng/(Pa·s·m²)		Report value of the	Sample No.	Coated	Un-coated	Difference	
	WVT rate of the WRB in combination with the	1	67.5	112.8	45.3		
	ng/(Pa·s·m²)	OSB applied 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 4.1.1.23(b) Results of Testing of Water Vapour Transmission (WVT), "Durex Blue Shield"

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

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

Property	Units	Requirements	Results				
WVT ng/(Pa·s·m²)		Report value of the WVT rate of the WRB in combination with the OSB applied at the maximum thickness and the OSB alone	Sample No.	Coated	Un-coated	Difference	
			1	72	90	22	
	$ng/(Pa\cdot s\cdot m^2)$		2	70	99	29	
			3	90	118	28	
			Average	77.3	102.3	25	

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

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

Table 4.1.1.24. Results of Testing of Accelerated Weathering of WRB

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

Table 4.1.1.25. Results of Testing of Drainage Capacity

			Result								
Property	Unit	Requirement	Panel 1 total (g)		otal	P	Panel 2 to (g)	otal	]	Panel 3 total (g)	
				ined ter			ined iter			ined iter	
			1 h	48 h	Result	1 h	48 h	Result	1 h	48 h	Result
Drainage capacity	g/m <sup>2</sup>	The unit-retained water (based on the projected drainage area) following 1 h, and 48 h of drainage period shall not be greater than 30 g/m² and 15 g/m², respectively, for any single test specimen	24.7	0.0	Pass	18.3	0.0	Pass	20.3	0.0	Pass
	%	The drainage capacity shall not be less than 98% of the water mass delivered into the EIFS wall specimen	99.6			99	9.7		99	9.7	

**Table 4.1.1.26. Nail Popping Resistance** 

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

#### 4.1.2 Fire Performance

Where allowed by the Code through conformance to Article 3.1.5.5. of Division B of the NBC 2015, the "Durex Quantum Select" system having "Green Guard" as the WRB, "Flexcrete" as the adhesive, "Quantum Select EPS" as the EPS Type 1 or Type 2 insulation boards, up to 152-mm-thick, "Flexcrete" or "Uniplast Acrybond-S" as the base coat, "Architectural Coatings" as the finish coat; "Durex Standard Mesh" having a minimum weight of 142.5 g/m² and 125-mm mesh overlap when using 152-mm-thick insulation, and 100-mm mesh overlap when using lesser thicknesses, are acceptable for use in buildings required to be of noncombustible construction that are not more than three storeys in height if not sprinklered, and an unlimited number of storeys in height if sprinklered. For a detailed description of the compliance of the related systems to the requirements of Article 3.1.5.5. of Division B of the NBC 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, 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-001for further details on the combination of coatings/systems falling under the scope of the said listings.

#### 4.1.3 Additional Performance Data

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

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# Plant(s)

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**Date modified:** 2019-12-02

# Appendix A – Additional Performance Data

Data presented in this section is beyond CCMC's opinion in Section 1 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-S741-08 have been performed on "Durex AirStop" weather-resistive barrier by an accredited testing agency. Results of the mentioned tests are listed below:

Table A.1. Air Permeance Test Results for "Durex AirStop" per CAN/ULC-S741-08<sup>(1)</sup>

Test	CAN/ULC-S741-08 Requirement	Result
Tested as per CAN/ULC-S741 with five 1-m <sup>2</sup> membrane specimens and measured for air permeance at a minimum of six air pressure differentials (ΔP) between 0 and 300 Pa – unconditioned (prior to UV and heat aging).	Air leakage rate at 75 Pa $\Delta P$ $\leq 0.02 \text{ L/(s} \cdot \text{m}^2)$	0.0015 L/(s·m²)
Tested as per CAN/ULC-S741 with five 1-m <sup>2</sup> membrane specimens tested and measured for air permeance at a minimum	Where less than 0.01 L/(s·m²) for unconditioned specimens, the increase of the air leakage rate at	$0.0018 \text{ L/(s·m}^2)^{(2)}$
of six air pressure differentials ( $\Delta P$ ) between 0 and 300 Pa – conditioned (after UV and heat aging).	75 Pa $\Delta P$ for conditioned specimens $\leq 0.001$ $L/(s \cdot m^2)$	$0.0003 \text{ L/(s·m}^2)^{(3)}$

#### **Notes to Table A.1:**

- 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