



**Durex<sup>®</sup>** 000  
**Quantum Select**

**Insulated Drained Cladding**

*Pushing the envelope through the Quantum Select Family of Systems*



# Durex® Quantum Select

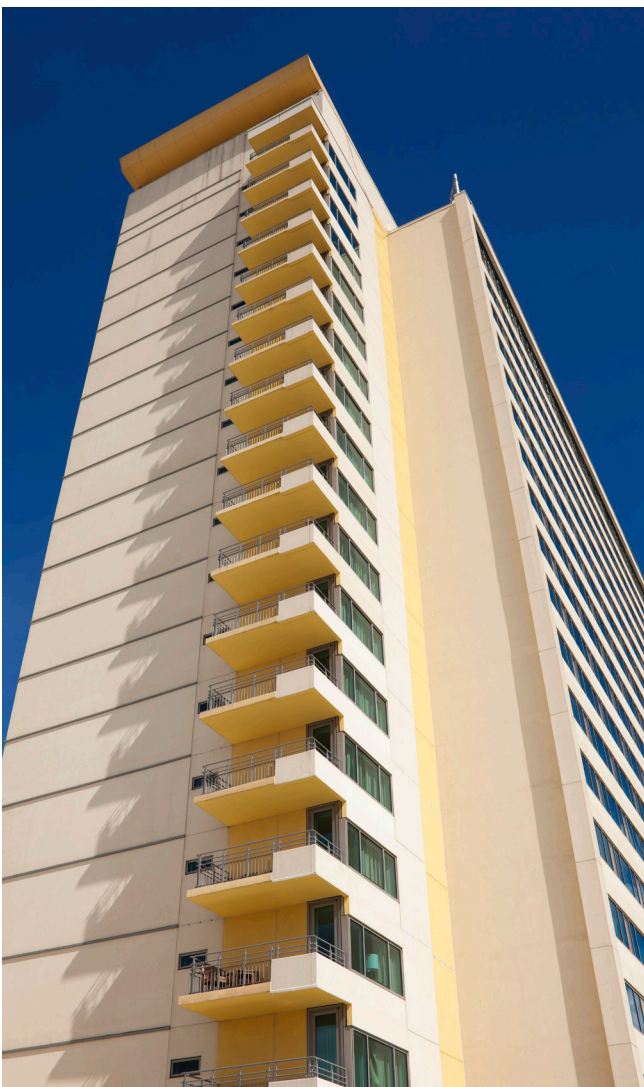
Durex® Quantum Select is an energy efficient, high performance, pressure-moderated, rainscreen, insulated cladding system that features a geometrically defined drainage cavity. This outperforming insulated cladding system is designed to provide effective drainage and accelerated drying of any incidental moisture trapped behind the cladding, while retaining maximum insulation value through the elimination of thermal bridging.

Durex® Quantum Select's primary advantage through its provision of continuous insulation (CI) reduces temperature variations and maintains the building enclosure and its framing elements at temperatures close to those of the building's interiors. Durex® Quantum Select, is an excellent, efficient, cost-effective, light weight cladding system for use in new and retrofit, institutional, residential, commercial and industrial construction.

Durex® Quantum Select increases the energy efficiency and overall wall performance of new and/or retrofit construction by adding insulation continuously on the exterior face of the structure, reducing thermal bridging, and by providing air tightness of the building envelope. Durex® Quantum Select meets and exceeds the design requirements of the National Energy Code of Canada for Continuous Insulation (CI) and air tightness requirements.

Durex® Quantum Select is particularly the most effective cladding solution for increasing the service life of older, energy inefficient, deteriorating buildings.

Durex® Quantum Select complies with the applicable Fire Protection requirements of Part 3 of Division B of the National Building Code (NBC) with respect to CAN/ULC-S114, CAN/ULC-S101 and CAN/ULC-S134.





# Durex® Quantum Select Guide

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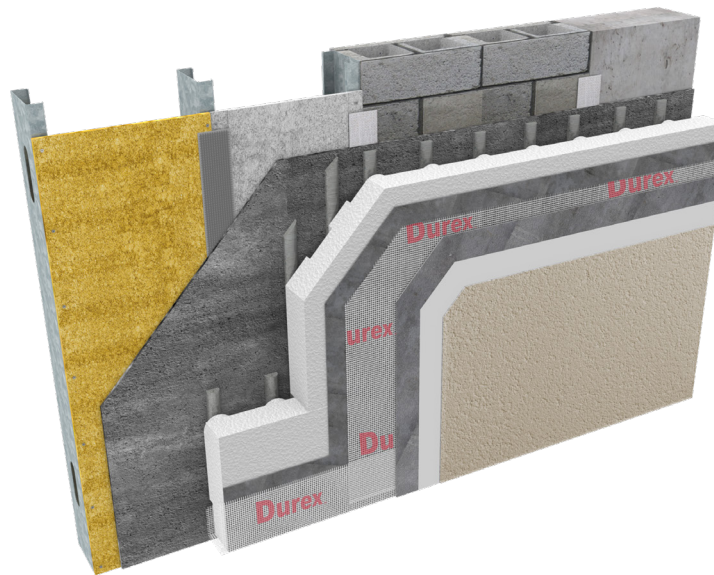


# Advanced Rainscreen Cladding

The Superior Performance Cladding

Durabond's leading exterior insulation and finish system (EIFS) that integrates the performance of several wall components for providing the essential environmental separation controls of heat/air/moisture/fire while providing the strength, durability, and desired aesthetics. The Quantum Select Family of Systems features a 10 mm geometrically defined drainage cavity (GDDC) that provides drainage and accelerated drying of any incidental moisture ingress into the wall cavity while maximizing energy efficiency of the wall through continuous insulation. Durex® Quantum Select is intended to be used on virtually any type of construction, new and retrofit, regardless of age or wall construction.

**Durex®**   
**Quantum Select**  
 Insulated Drained Cladding

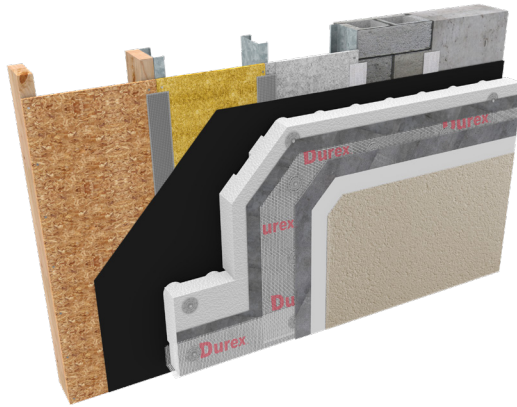


Description	Advantages	Options
<p>Quantum Select is a high performance, insulated cladding system featuring a weather resistive barrier that provides air and moisture control. Includes an Expanded Polystyrene (EPS) insulation having an integrated 10 mm Geometrically Defined Drainage Cavity (GDDC) to provide added drainage and accelerated drying of incidental moisture passing the cladding, a reinforced, polymer-modified coating system (Lamina) providing the durability of the system and the desired aesthetics.</p> <p><b>Applications:</b></p> <ul style="list-style-type: none"> <li>• New Construction</li> <li>• Retrofits and Over-cladding</li> <li>• Commercial</li> <li>• Institutional</li> </ul>	<ul style="list-style-type: none"> <li>• Thermally efficient insulation and finish cladding system, providing continuous exterior insulation eliminating thermal bridges</li> <li>• Tested and proven to retain R-value when compared to conventional EIFS</li> <li>• Effective moisture control strategies</li> <li>• Meets coastal and noncoastal moisture management requirements</li> <li>• 10 mm Geometrically Defined Drainage Cavity (GDDC)                             <ul style="list-style-type: none"> <li>• Gravity induced flow</li> <li>• Allows for efficient drainage</li> <li>• Eliminates capillary actions</li> <li>• Accelerate drying</li> <li>• Diffuses vapour flow</li> </ul> </li> <li>• Pressure moderated</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Air / Vapour / Moisture Barrier</b>                              Flexcrete / Flex Seal / Green Guard / Mastic 100 / Blue Shield / Ectoflex / Airstop  <i>(Design will dictate type of barrier required)</i> </li> <li>• <b>Attachment</b>                              Flexcrete / Monobase / VCA 3.0  <i>(Type of substrate and design will dictate type of attachment)</i> </li> <li>• <b>Insulation</b>                              Minimum thickness 2" (50mm) channeled vertically for positive drainage                         </li> <li>• <b>Fibremesh Reinforcement</b>                              Depending on impact resistance required substitute with appropriate Fibreglass Mesh                         </li> <li>• <b>Base Coat</b>                              May substitute Uniplast or Monobase with Flexcrete  <i>Choice of base coat is based on project and building code requirements in respect to combustibility / non-combustibility.</i> </li> </ul>



# Durex® Quantum Select Systems Variations

Versatile Options for Project Requirements



## Durex® Quantum Select MF

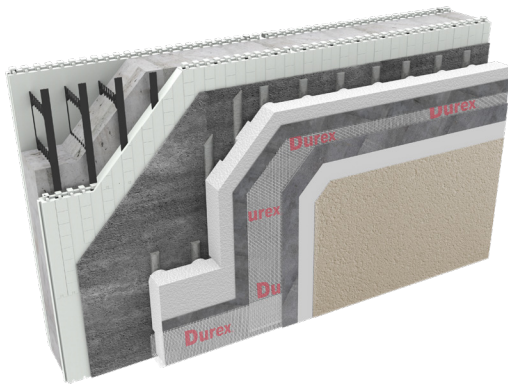
Quantum Select MF (mechanically fastened) incorporates all of the special features of the main system and facilitates attachment to substrates where adhesion is questionable and/or not possible. Quantum Select MF is especially useful in re-cladding applications where the substrate may be deteriorated or soiled or over-clad applications that would eliminate the removal of the original cladding. Several types of Water Resistant Barriers (WRBs) are available that could facilitate the use of mechanical fasteners.

### Applications

- New Construction
- Retrofits
- Over-cladding
- Commercial
- Institutional
- Residential
- Industrial

### Advantages

- Specifically designed to Facilitate attachment to substrates
- Can be used in combination with adhesion attachment
- Effective moisture control strategies
- 10 mm drainage path
- Meets coastal climate capillary break requirements
- Gravity induced flow
- Pressure moderated



## Durex® Quantum Select ICF

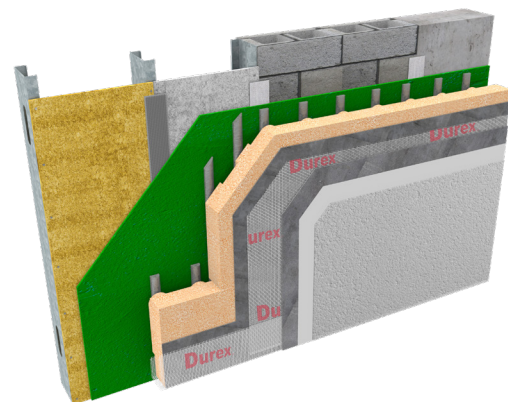
Quantum Select ICF is specially designed for Insulated Concrete Form (ICF) constructions. It incorporates all of the special features of the main system, including the water Resistant Barrier (WRB) component.

### Applications

- New ICF Construction
- ICF Retrofits
- Commercial
- Institutional
- Residential

### Advantages

- Specifically designed for Insulated Concrete Forms (ICF)
- Effective moisture control strategies
- 10mm drainage path
- Gravity induced flow
- Pressure moderated



## Durex® Quantum Select 5.0

Quantum Select 5.0 incorporates all the special features of the main system, while featuring a high density, expanded polystyrene (EPS) rigid insulation with high thermal resistance of R 5.0 per inch. (RSI 0.88 per 25 mm).

### Applications

- New Construction
- Retrofits
- Commercial
- Institutional
- Residential

### Advantages

- High density EPS proven to achieve an R-value of R-5 per inch at -18°C
- Effective moisture control strategies
- 10mm drainage path
- Gravity induced flow
- Pressure moderated
- Meets coastal climate capillary break requirements

# System Features & Advantages

## Benefits & Features of Durex® Quantum Select

### Excellent Thermal Resistance

- Control convective heat flow currents and maintains R-Value
- Provides thermal efficiency and reduce thermal bridging
- Reduce temperature variations
- Less structural movements due to less thermal variations

### Effective Moisture Control Strategies

- 10 mm GDDC (geometrically Defined Drainage Cavity)
  - Superior drainage capacity
  - Eliminates capillary action
  - Diffuses vapour flow
- Optimal Drainage Path
  - Gravity induced flow
  - Accelerates drying of drainage plane

### Air/Vapour Control

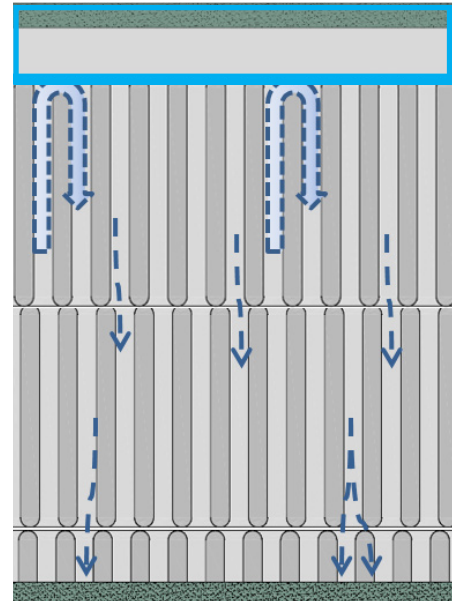
- Capacity to provide air flow control
- Capacity to provide vapour low control

### Fire Protection

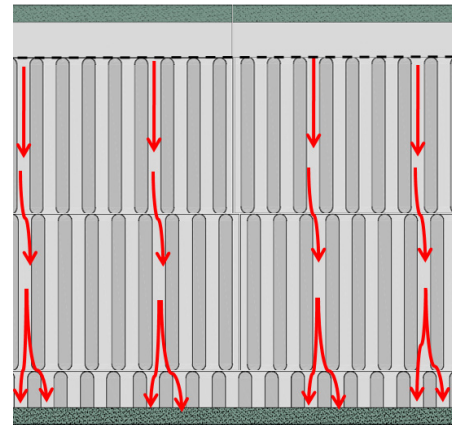
- CAN/ULC-S101, 2-hrs Fire Resistance Rating Non-Loadbearing Wall Assembly ULC W-456
- CAN/ULC-S101, 2-hrs Fire Resistance Rating Loadbearing Wall Assembly ULC W-485
- CAN/ULC-S101, 2-hrs Fire Resistance Rating Non-Loadbearing Wall Assembly ULC W-425
- CAN/ULC-S101, 1-hr Fire Resistance Rating Loadbearing Wall Assembly ULC W-489
- CAN/ULC-S101 & S114 15-min Stay-in-Place (ULC EW13, EW21, EW22 & EW23)

### Full Compliance

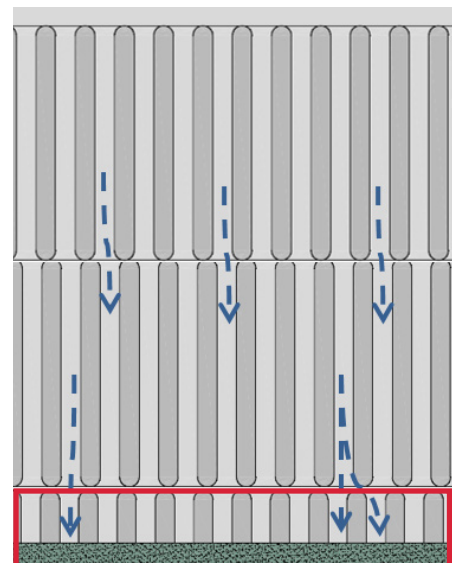
- National building Code (NBC) Canada
- Canadian Provincial and Territorial Building Codes
- CCMC # 13103-R
- Quality Assurance Program (QAP)
- Design Authorities current requirements



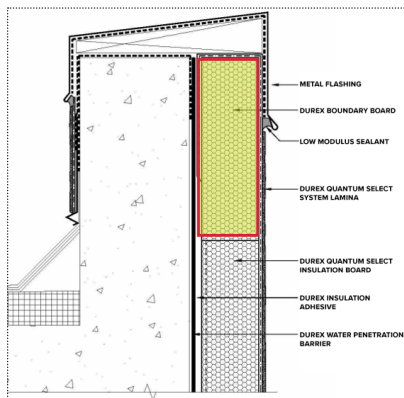
Full Thermal Resistance Retention



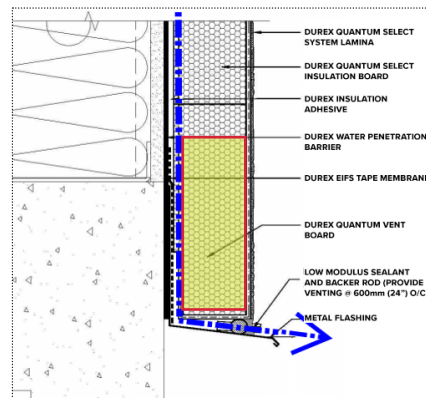
Guarantee Optimal Drainage



Facilitates Drainage to Exterior



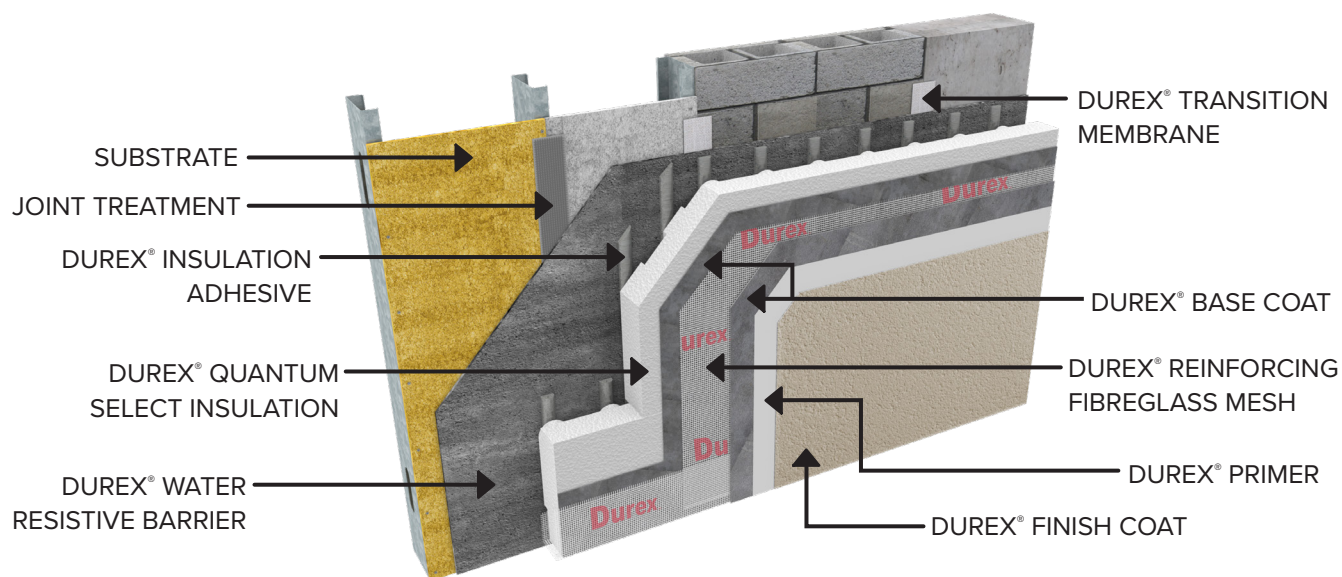
Top of Wall



Bottom of Wall



# Insulation Types and Component Options



## DUREX® INSULATION OPTIONS

PRODUCT	TYPE	FEATURES	REMARKS
<b>Quantum Select</b>	EPS Type 1	R 3.9 (0.65 RSI) / in.	CCMC #13103
<b>Quantum Select Type 2</b>	EPS Type 2	R 4.0 (0.70 RSI) / in.	CCMC #13103
<b>Quantum Select 5.0</b>	EPS Type 4	R 5.0 (0.88 RSI) / in	CCMC #13103

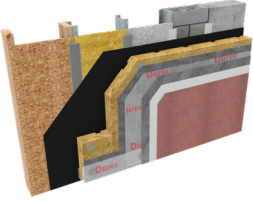
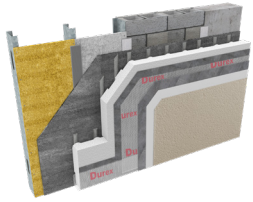
## WATER RESISTIVE BARRIER

PRODUCT	TYPE	FUNCTION	REMARKS
<b>Blue Shield</b>	Trowel On	Air Barrier	CCMC #13103
<b>Green Guard</b>	Trowel On	Air / Vapour Barrier	CCMC #13103
<b>Flexcrete</b>	Cementitious	Air Barrier	CCMC #13103
<b>FlexSeal</b>	Peel & Stick	Vapour Barrier	CCMC #13103
<b>FlexSeal VP</b>	Peel & Stick	Air Barrier	CCMC #13103
<b>EctoFlex</b>	Cementitious	Vapour Barrier	CCMC #13103
<b>Mastic 100</b>	Trowel On	Air Barrier	CCMC #13103

# High-rise Code Compliance

## Fire Safety - Performance Properties & Design

Durex® Quantum Select does incorporate foam plastic insulation and a protective lamina with a Non-combustible base coat and reinforcing fabric that offer protection and full code compliance for use in buildings required to be of Non-combustible construction. The National Building Code of Canada implements some of the stringiest requirements for fire safety in the world. The table below summarizes the requirements and related code sections that govern the use of EIFS in buildings required to be of Non-combustible construction. The Durex® Quantum Select has been extensively tested to meet such stringent requirements (*refer to pages 8-11 for listing of compliant wall assemblies*).

2015 NBC and 2012 OBC - Part 3				
PERMITTED UNPROTECTED OPENING	CONSTRUCTION TYPE	CLADDING TYPE	AVAILABLE SYSTEMS	CODE REFERENCE
0 - 10%	Combustible or Non-combustible	Non-combustible	<b>EQUALITE SELECT</b>	Article 3.2.3.7.
				
10 - 25%	Combustible or Non-combustible	Non-combustible	<b>QUANTUM SELECT</b>	Article 3.2.3.7. and; Clause 3.2.3.8(1)(b) or; Article 3.1.5.5.**
25 - 50%	Combustible or Non-combustible	Non-combustible		
50 - 100%	Combustible or Non-combustible	Combustible or Non-combustible		

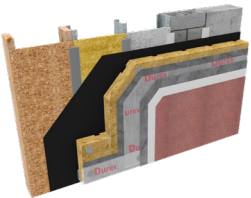
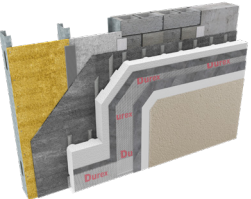




# Low-rise Code Compliance

## Fire Safety - Performance Properties & Design

Durex® Quantum Select is a widely used cladding system for low rise residential and commercial construction because of its design aesthetic freedom, thermal efficient properties and cost effectiveness. The Table below summarizes the requirements of the National Building Code of Canada for fire and safety when used in facades that are in proximity to the property line. The Durex® Quantum Select has been extensively tested to meet such requirements (*refer to pages 8-11 for listing of compliant wall assemblies*).

2015 NBC and 2012 OBC - Part 9				
LIMITING DISTANCE	CONSTRUCTION TYPE	CLADDING TYPE	AVAILABLE SYSTEM	CODE REFERENCE
< 0.6m	Combustible or Non-combustible	Non-combustible	<b>EQUALITE SELECT</b>	Clause 9.10.15.5.2(c)**
				
< 1.2m but > 0.6m	Combustible or Non-combustible	Combustible or Non-combustible	<b>QUANTUM SELECT</b>	Clause 9.10.15.5.2.2 (a) & (b)
				
> 1.2m	Combustible or Non-combustible	Combustible or Non-combustible		



# System Solutions

## ULC Testing & Combustibility Solutions

Durex® Quantum Select has been extensively tested by world renowned organizations for its compliance to the Fire & Safety requirements. The table below is a summary of publicly available listings of the various most common Durex® Quantum Select wall assemblies. The referenced listings are formal documentation available to assist the designer, builder, developer, and authorities having jurisdiction etc to confirm compliance to the applicable building codes. (Contact your Durabond representative for an expanded and comprehensive list of tested assemblies).

ULC LISTING	CLADDING TYPE	LAMINA TYPE	FIRE RATING	ASSEMBLY TYPE	INSULATION THICKNESS	DURABOND SYSTEM
<b>W456</b>	Non-combustible	Non-combustible (Uniplast)	2 Hours from Interior	Non-Loadbearing	6"	Quantum Select
<b>EW21</b>	Non-combustible	Non-combustible (Uniplast)	15 min. Exterior Exp.	Non-Loadbearing	6"	
<b>EW22</b>	Non-combustible	Non-combustible (Monobase)	15 min. Exterior Exp.	Non-Loadbearing	6"	
<b>W485</b>	Non-combustible	Non-combustible (Uniplast)	2 Hours from Interior	Loadbearing	6"	
<b>W489</b>	Non-combustible	Non-combustible (Uniplast)	1 Hour from Interior	Loadbearing	6"	
<b>W425</b>	Non-combustible	Non-combustible (Uniplast)	2 Hours from Interior	Non-Loadbearing	2"	Equalite

INTERTEK LISTING	CLADDING TYPE	LAMINA TYPE	FIRE RATING	ASSEMBLY TYPE	INSULATION THICKNESS	DURABOND SYSTEM
<b>DPL/WEIFS 30-01</b>	Combustible	Combustible (Flexcrete)	Compliant to CAN-ULC-S134	Non-Loadbearing	6"	Durex® Quantum Select





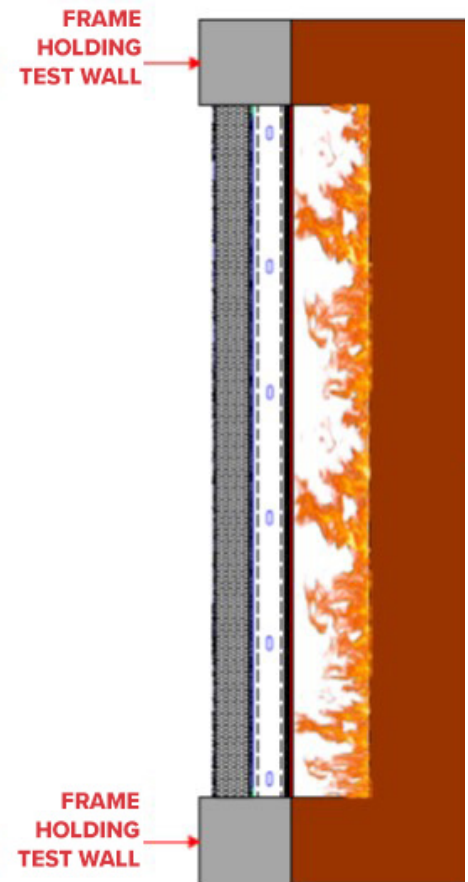
# Fire Resistance Testing

Durex® EIFS Safety & Fire Code Compliance

**CONFINEMENT** of source of Fire preventing spreading of Fire into adjacent areas.

- Fire Resistance Rating of Exterior Wall
- Test Method CAN/ULC S101

ULC LISTING	FIRE RATING	ASSEMBLY TYPE	INSULATION THICKNESS
<b>W442</b>	1 1/2 Hours from Interior	Non-Loadbearing	2"
<b>W442</b>	1 Hour from Exterior	Non-Loadbearing	2"
<b>W425</b>	2 Hours from Interior	Non-Loadbearing	2"
<b>W456</b>	2 Hours from Interior	Non-Loadbearing	6"
<b>W485</b>	2 Hours from Interior	Loadbearing	6"
<b>W489</b>	1 Hour from Interior	Loadbearing	6"



**CAN/ULC S101**  
**ASTM E119**

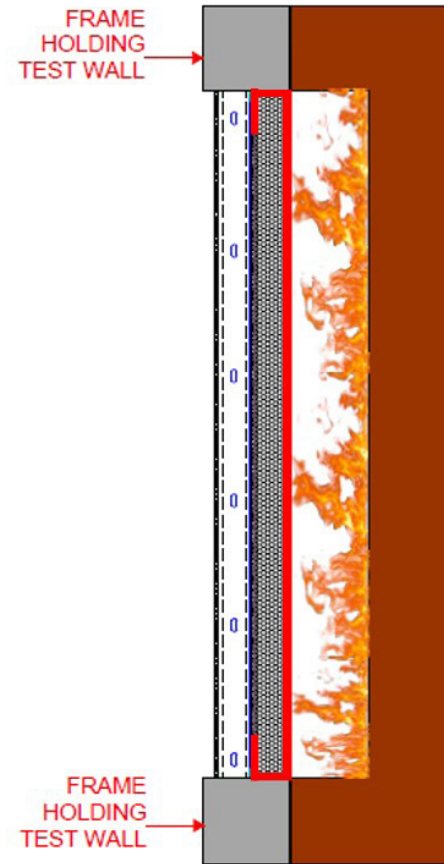


# Fire Resistance Testing

Durex® EIFS Safety & Fire Code Compliance

## PROTECTION Spatial Separation Protection of Foam Plastics - Clause 3.2.3.8(1)(b)

- Lamina must be Non-combustible CAN/ULC S114
- Lamina must remain in place protecting EPS from flames for minimum 15 minutes
- To prevent spread of fire from adjacent building



**CAN/ULC S101  
ASTM E119**

ULC LISTING	CLADDING TYPE	LAMINA TYPE	FIRE RATING	INSULATION THICKNESS
<b>EW13</b>	Non-combustible	Non-combustible (Uniplast)	15 min. Exterior Exp.	2"
<b>EW21</b>	Non-combustible	Non-combustible (Uniplast)	15 min. Exterior Exp.	6"
<b>EW22</b>	Non-combustible	Non-combustible (Monobase)	15 min. Exterior Exp.	6"
<b>EW23</b>	Non-combustible	Non-combustible (Uniplast)	15 min. Exterior Exp. (Over ICF)	2 1/2"



# Fire Resistance Testing

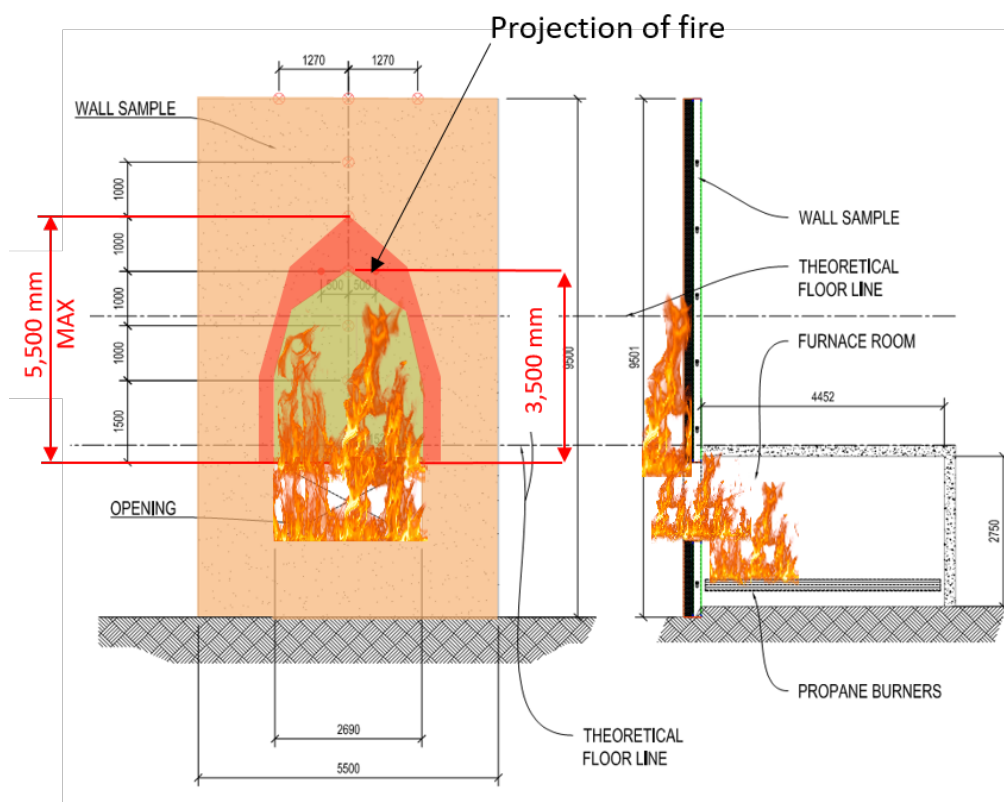
Durex® EIFS Safety & Fire Code Compliance

## PROPAGATION Limiting of Fire Spread Up the Exterior Facade Compliance to Article 3.1.5.5.

- 3 storey assembly (9.5 m)
- Simulates actual conditions
- Test duration 30 minutes of open flames
- Test continues until fire self extinguishes
- Flame propagation not greater than 5.0m
- Heat flux at 3.5m above, but not greater than 35 kW/m<sup>2</sup>
- Wall assembly is inclusive of typical joints & backwrapping



INTERTEK LISTING	CLADDING TYPE	LAMINA TYPE	INSULATION THICKNESS
DPL/WEIFS 30-01	Combustible	Combustible (Flexcete)	6"



CAN/ULC S134

# Decorative Finishes

Versatile Finishes for Quantum Select Family of Systems

## Classic Finishes



### Marble Coat 1.5

Our most popular texture, is a coarse high-build finish with added depth of texture.



### Marble Coat 1.0

Another popular texture, a medium build finish for a slightly finer but deep look.



### Venecian

A medium build finish with added aggregate for a classic swirl look.



### PebbleFloat

A coarse, high build finish with uniform stone sizes for a pebble-like appearance.



### Sandex

Our finest float applied coating that yields a fine, uniform pebble finish.



### Graffiato

A coarse finish with added large aggregate for a linear scratched appearance.



## Roller Applied Finishes



### Brushcoat

A versatile textured decorative coating with excellent permeability and water repellency.



### Roltex

A high build textured roller applied coating with excellent hiding power.



### EMC

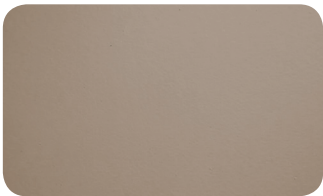
Breathable, highly elastomeric acrylic coating with superb crack bridging capabilities.



### Dur-X-Cel

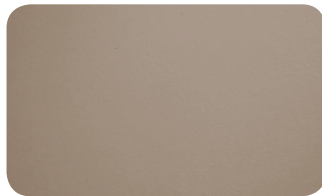
A smooth protective coating also used to re-coat trowel applied finishes.

## Advanced Roller Applied Finishes



### Acrotel EC-A

High-performance and elastomeric coating with anti-carbonation technology that protects concrete.



### Ecto-Sil

A silicone based elastomeric protective coating with unparalleled UV and weathering resistance.



### Stucco Spray

Traditional and elegant spray applied finish ideal for coating large wall areas.



### Trim Spray

Specially formulated spray applied coating with fine aggregates for mouldings and trims with superb hiding power.

## Spray Applied Finishes



## Premium Finishes

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### Sandstone

A pre-cast like finish formulated to give a limestone appearance for a sharp, modern look.



### Rasato

Coarse grade smooth finish for a unique texture with a rustic feel.



### Rustico

Medium grade smooth finish for a uniform, classic texture.



### Antico Glaze

Translucent glaze that simulates a natural aging effect. For use over any texture.

## Craftsmen Series

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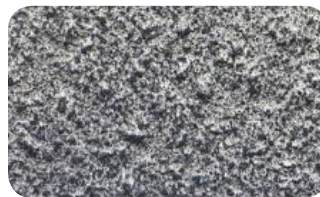
### Dur-A-Brick

Simulate the look and feel of masonry with all the benefits of EIFS cladding!



### Knock Down

Put on thick, pull off with a sponge, and knocked down with a trowel for a classic California finish.



### Pull Off

Put on thick and pull off with a sponge for a modern performing old-English style finish.



### Timber-FX

Made with a custom acrylic glazed polymer engineered to create a wood grain finish.

## Luxury Series

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### Granite

High build coating with coloured aggregates embedded in clear, 100% acrylic resin.



### Gemstone

High build protective and decorative coating with coloured aggregates and oversized mica flakes.



### Century Stone

100% acrylic, multi-coloured coating consisting of proprietary coloured aggregates and flakes.



### Stonetex

High build, multi-coloured protective coating with coloured natural stone chips in clear, 100% acrylic resin.



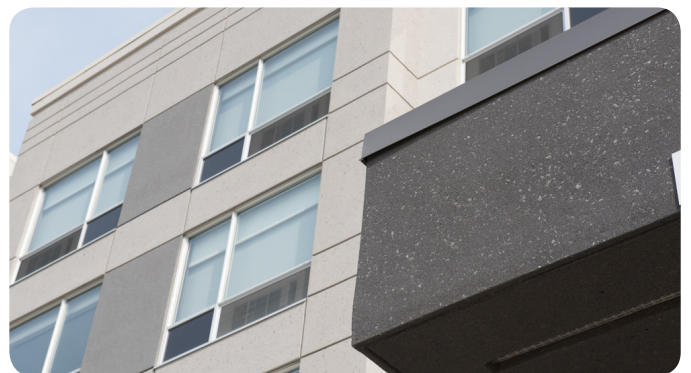
### Cromatex

Durable, metallic coating made with high grade acrylic polymers that yields a sharp, strong finish.



### Crystal Coat

High build, multi-coloured reflective coating with a rich, vibrant texture.





A large, three-dimensional, silver-colored logo for 'Yorkdale' is mounted on the exterior wall of a modern building. The logo is in a cursive script and is positioned above a large window with a grid pattern. The building's facade is a light beige color, and the sky is a clear, bright blue.

[www.durabond.com](http://www.durabond.com)

**DURABOND** 

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The recommendations and information in this chart/document are for the application of Durex® products manufactured by Durabond, and are based on practical knowledge for general site conditions and uses. This chart is to be used as a reference guide only to identify and display the various products for general, non-site specific applications for a variety of installations. Differences in site conditions, preparations, materials are continuously variable and unknown.

As such, no warranty, guarantee or legal binding relationship is implied whatsoever with these products and systems and no guarantee can be made to their performance. In addition, preparation and condition of the substrate is of such utmost importance that a Durabond Technical Representative must be notified prior to installation of any of the aforementioned products and/or systems.

An installer must always prepare the surface to the recommendations found on the current data sheet of each product written and produced by Durabond Technical Coatings Limited. These data sheets can be obtained from Durabond's website, [www.durabond.com](http://www.durabond.com), or by contacting a Technical Sales Representative directly.