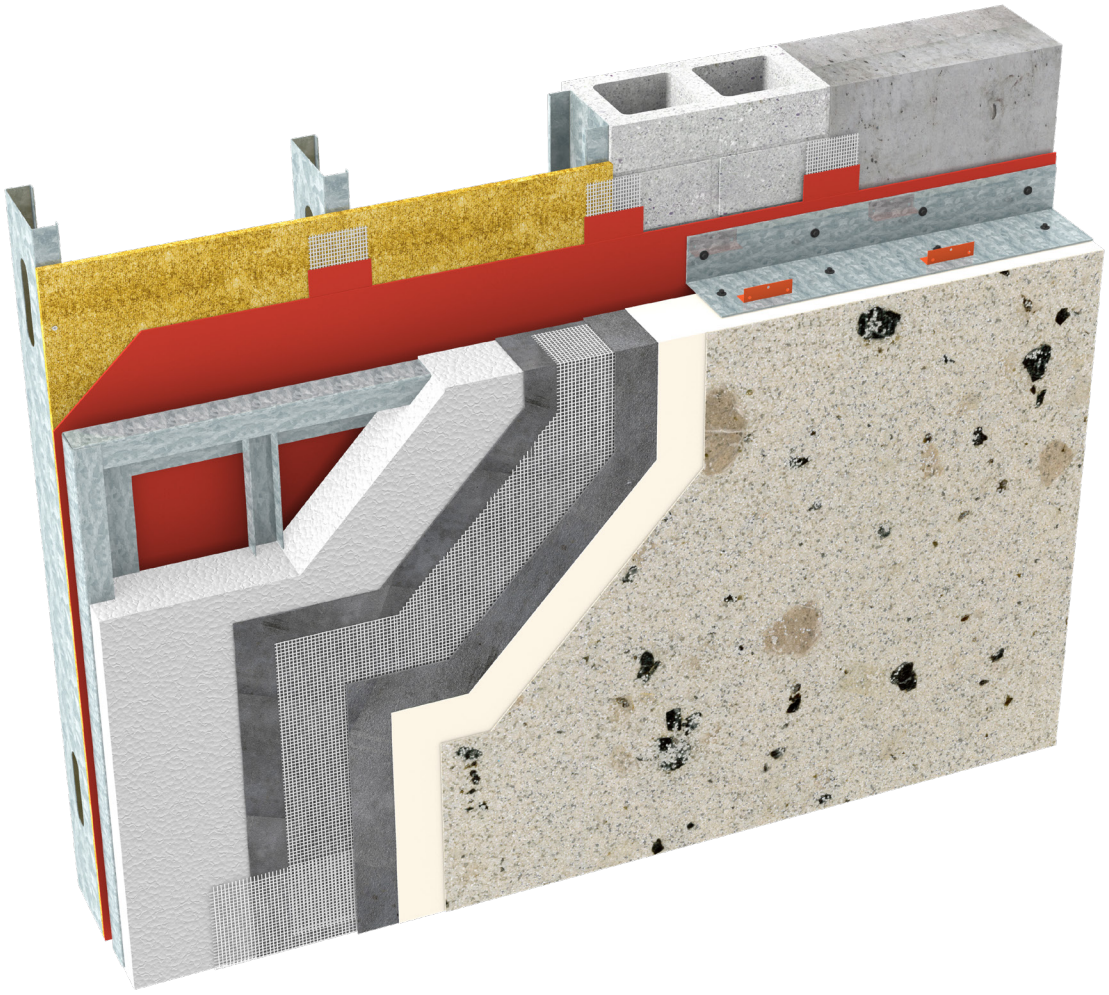
Durex® Panelite

A Prefabricated Structural Cladding Panel System



CCMC 13103-R
CAN/ULC S716.1 Materials
CAN/ULC S716.2 Installations
CAN/ULC S716.3 Design Application

G.D.D.C Factor = 47%
C.I Factor = 0.65 RSI/Inch Type 1 EPS
= 0.70 RSI/Inch Type 2 EPS
= 0.70 RSI/Inch Semi-Rigid Mineral

PreFab Cladding | Ultra High Impact Resistance | Drained | Cost Effective

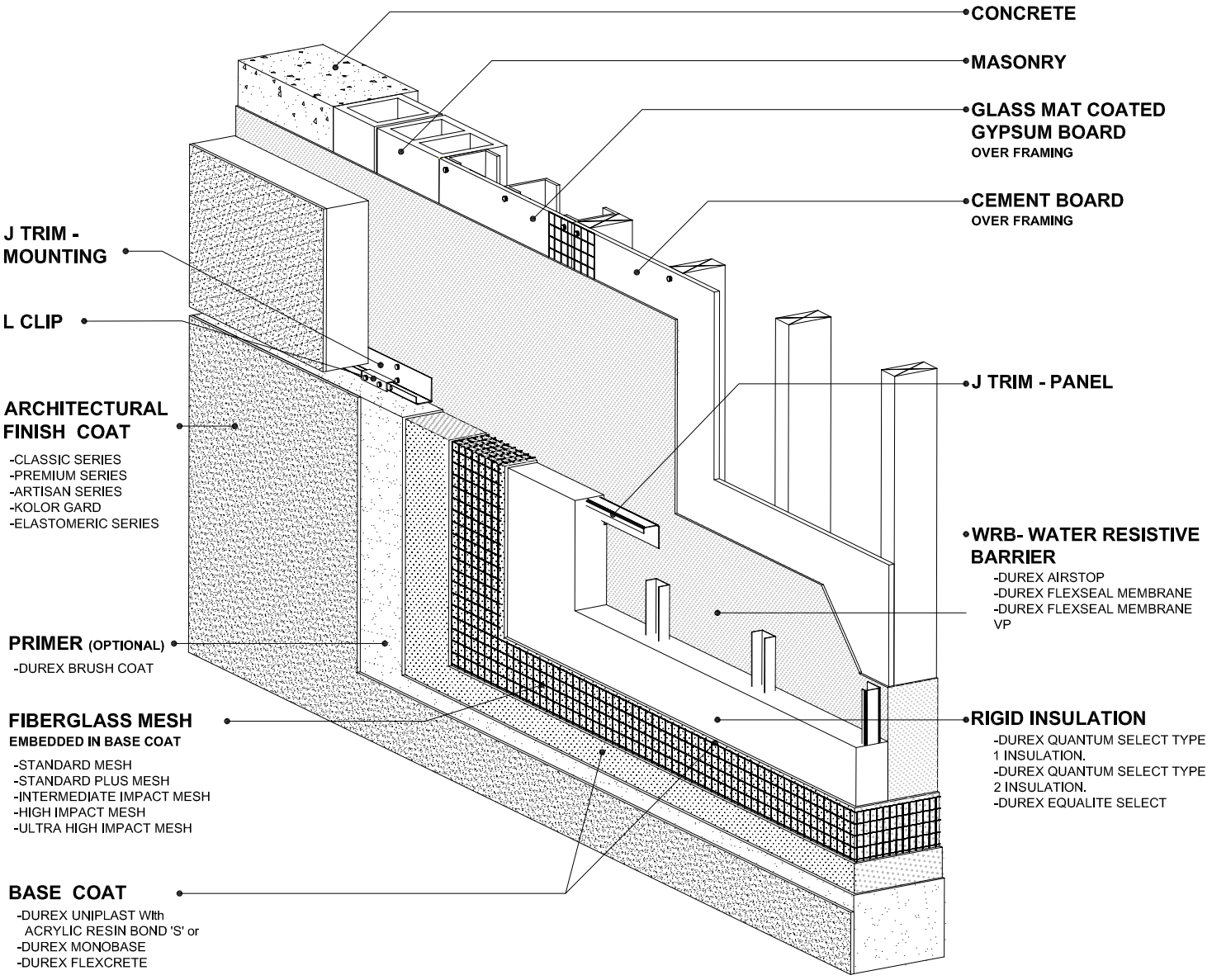
Protect. Enhance. Outperform.

DURABOND 50 YEARS 1967–2017
1-877-387-2266 info@durabond.com
www.durabond.com

ISOMETRIC & SPECIFICATIONS

Durex®
Panelite

Prefabricated Structural Cladding Panel



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System Isometric & Components

PART 1: - GENERAL

1.1 GENERAL REQUIREMENTS

.1 All conditions of the contract and Division 1, General Requirements apply to this section.

.2 All work shall meet applicable codes and standards, the Occupation Health & Safety Act, manufacturer's recommendations and good building practice.

.3 System Description: A pre-engineered, prefabricated, lightweight, insulated wall cladding panel system consisting of a light-weight steel framing (LSF) that is made of structural, cold-formed steel members, engineered specifically for a set of specified design loads, spans, sectional configurations, on which a pressure moderated, Geometrically Defined Drainage Cavity (GDDC) exterior insulation and finish system is integrated. The prefabricated insulated panel is installed over the weather resistive barrier that forms part of the exterior insulation and finish system and that that is installed over the substrate. The weather resistive barrier serves as well as an air/vapour barrier of the building system. The prefabricated, lightweight, insulated cladding panel system is intended for use on buildings where the Building Code allows the use of fire-tested wall assemblies which include combustible foam plastic insulation.

SPEC NOTE: The Designer must decide whether the wall assembly of the structure requires an air barrier or an air/vapour barrier.

1.2 COORDINATION

.1 Ensure that the work of this section is coordinated with the work of other related sections.

1.3 RELATED SECTIONS

.1	Section 03 30 00	Cast-in-Place Concrete
.2	Section 04 20 00	Unit Masonry
.3	Section 05 41 00	Structural Metal Stud Framing
.4	Section 06 10 00	Rough Carpentry
.5	Section 07 20 00	Thermal Protection
.6	Section 07 26 00	Vapour Retarders
.7	Section 07 27 00	Air Barrier
.8	Section 07 62 00	Flashing and Sheet Metal
.9	Section 07 80 00	Fire and Smoke Protection
.10	Section 07 90 00	Joint Protection (Sealants)
.11	Section 08 00 00	Openings
.12	Section 08 50 00	Windows
.13	Section 09 28 00	Backing Board and Underlayment

1.4 REFERENCES

.1 American Society for Testing Materials

.1	ASTM A6	Standard Specification For General Requirements For Rolled Structural Steel Bars, Plates, Shapes, And Sheet Piling
.2	ASTM A283	Standard Specification For Low And Intermediate Tensile

		Strength Carbon Steel Plates
.3	ASTM A167	Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
.4	ASTM A653	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process
.5	ASTM A666	Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar
.6	ASTM A715	Standard Specification for Steel, Sheet And Strip, High-Strength, Low-Alloy, Hot-Rolled, And Steel Sheet, Cold-Rolled, High-Strength, Low-Alloy, With Improved Formability.
.7	ASTM A792	Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated By The Hot-Dip Process
.8	ASTM A1003	Standard Specification for Steel Sheet, Carbon, Metallic- And Nonmetallic-Coated For Cold-Formed Framing Members.
.9	ASTM A1008	Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy With Improved Formability, Solution Hardened, And Bake Hardenable.
.10	ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus.
.11	ASTM C954	Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness
.12	ASTM C955	Standard Specification for Cold-Formed Steel Structural Framing Members.
.13	ASTM C578	ASTM C578-19 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
.14	ASTM C1002	Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
.15	ASTM C1177/C1177M	Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
.16	ASTM C1338	Standard Test Method for Determining the Fungi Resistance of Insulation Materials and Facings.
.17	ASTM C1382	Standard Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints.
.18	ASTM C1397	Standard Practice for Application of Class PB Exterior Insulation and finish Systems (EIFS) and EIFS with Drainage.
.19	ASTM C1481	Standard Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS).
.20	ASTM D1623	Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
.21	ASTM D5035	Standard Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method).
.22	ASTM D5420	Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of Striker Impacted by Falling

		Weight (Gardner Impact).
.23	ASTM E84	Standard Test Method for Surface Burning Characteristics of Building Materials.
.24	ASTM E96/E96M	Standard Test Methods for Water Vapor Transmission of Materials.
.25	ASTM E330	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
.26	ASTM E331	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
.27	ASTM E283	Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors.
.28	ASTM E1131	Standard Test Method for Compositional Analysis by Thermogravimetry.
.29	ASTM E1252	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis.
.30	ASTM E2098	Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution.
.31	ASTM E2178	Standard Test Method for Air Permeance of Building Materials.
.32	ASTM E2357	Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
.33	ASTM E2486	Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
.34	ASTM F410	Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement.
.35	ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.
.36	ASTM G155-05a	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

.2 American Iron and Steel Institute (AISI)

.1	AISI 303	North American Specification for the Design of Cold-Formed Steel Structural Members

.3 Canadian Construction Materials Centre (CCMC)

.1 CCMC Technical Guide for the Evaluation of EIFS MF # 07 24 13.01.

.4 Canadian Standards Organization (CSA)

.1	CAN/CSA S136	North American Specification for the Design of Cold-Formed Steel Structural Members
.2	CSA S16	Design of Steel Structures

.5 Canadian Sheet Steel Building Institute (CSSBI)

.1 CSSBI Design Manual

.6 International Organization for Standardization (ISO)

.1	ISO 7892	Vertical Building Elements – Impact Resistance Tests –

		Impact Bodies and General Test Procedures
.2	ISO 7895	Facades made of components - Tests for resistance to positive and negative static pressure generated by wind.
.3	ISO 15148	Hygrothermal performance of building materials and products - Determination of water absorption coefficient by partial immersion.

.7 ULC (Underwriters Laboratories of Canada)

.1	CAN/ULC-S101	Standard Methods of Fire Endurance Tests of Building Construction and Materials.
.2	CAN/ULC-S102	Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
.3	CAN/ULC-S102.2	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.
.4	CAN/ULC-S114	Standard Method of Test for Determination of Non-Combustibility in Building Materials.
.5	CAN/ULC-S134	Standard Method of Fire Test of Exterior Wall Assemblies.
.6	CAN/ULC-S701	Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
.7	CAN/ULC S716.1	Standard for Exterior Insulation and Finish Systems (EIFS) – Materials and Systems.
.8	CAN/ULC-S716.2	Standard for Exterior Insulation and Finish Systems (EIFS) - Installation of EIFS Components and Water Resistive Barrier.
.9	CAN/ULC-S716.3	Standard for Exterior Insulation and Finish Systems (EIFS) - Design Application.

1.5 DESIGN CRITERIA

.1 Structural Design

.1 Design professional shall design the back-up wall in full compliance with the requirements of the National Building Code (NBC) of Canada and/or applicable provincial or territorial building codes. Sufficient details on architectural plans and drawings shall demonstrate compliance to the NBC.

SPEC NOTE: When used over stud wall framing, the structural wall framing members shall be at a maximum spacing of 406 mm (16”) o/c.

.2 Supporting Substrate

.1 All substrates shall be flat and plumb within 2 mm/m (1/4” per 10’), as per ASTM C 1397.

.2 All substrates shall be free of surface contamination, including (but not limited to): dirt, form release agents, efflorescence, oil and chalkiness.

.3 All substrates shall be free of any loose materials and cracks greater than 1 mm (1/24”) in width.

.3 Mass Wall Substrates

.1 Mass wall substrates shall be cast-in-place concrete, concrete masonry units or brick.

.2 Cast-in-place, concrete masonry units or brick shall be at least 28 days old.

.3 Unit masonry and brick veneer shall have mortar joints struck flush or recessed.

.4 Sheathing Substrates

.1 Apply the system to one of the following recommended substrate sheathings or substrate system or approved equivalent:

.1 Cementitious backer Board as per ASTM C1325.

.2 Glass-mat gypsum sheathing conforming to ASTM C1177/C1177M.

.3 OSB and/or plywood sheathing conforming to CSA O86. OSB conforming to CSA O325. Douglas fir Plywood conforming to CSA O121, Canadian Soft Plywood conforming to CSA O151 and Poplar Plywood conforming to CSA O153.

SPEC NOTE: Sheathing/substrate system type and condition shall be as approved by Durabond Products Ltd. Questionable substrates to be reviewed by Durabond Products Ltd. and/or the Designer.

.2 Sheathing shall be designed with framing to resist applicable wind loads, with a maximum design deflection of substrate not to exceed L/240.

SPEC NOTE: Sheathing shall be of a structural grade when used in conjunction with framing members spaced at 600 mm (24") o/c.

.3 Sheathing substrates shall be installed in accordance with the sheathing manufacturer's latest installation instructions and installed in general conformance with ASTM C1280. Sheathing joints shall be properly staggered. Vertical joints shall be offset by at least one framing member. Sheathing shall be:

.1 Minimum 11.1mm (7/16") and 12.7 mm (1/2") thick for OSB and plywood sheathing respectively.

.2 Minimum 12.7 mm (1/2") thick for glass-mat gypsum, cementitious and fibre cement boards.

.3 Continuously supported by framing.

.4 The sheathing shall be installed horizontally across framing when using wood sheathing.

.5 Having sheathing joints not exceeding 3.0 mm (1/8").

.6 Installed with corrosion resistance fasteners tight and flush to the sheathing surface (Not to be countersunk).

.7 Replaced where damaged or weathered.

.4 Light-gauge Steel Framing (LSF)

.1 A design professional shall undertake the structural design of the cold-formed, light-gauge steel framing (LSF) of the insulated prefabricated cladding, specifically for the applicable set of specified design loads, spans, sectional configurations in full compliance with the requirements of the National Building Code (NBC) of Canada and/or applicable provincial or territorial building codes.

.5 Engineering Calculations and Submission

.1 Detailed architectural plans, drawings and engineering calculations shall be submitted to demonstrate compliance to the NBC and/or applicable provincial or territorial building codes.

.2 The Engineering calculation submission shall include:

.1 Cladding Panels design criteria

.2 Wind load design criteria based on project specific conditions

.3 Wind load calculations

.4 Allowable load capacity of fasteners

.5 Allowable load capacity of connections

.6 Analysis of load transfers to structure per connection used
.7 Analysis of worst-case load conditions per connection
.8 Individual panel load analysis of actual worst-case condition to maximum allowable loads per connection

.6 The insulated cladding panel shall be designed for a maximum deflection not exceeding l/240 of the panel's clear span under positive or negative wind loads.
.7 Design all connections for the LSF units of the insulated cladding panel to be electric fusion welded or mechanically fastened to include means of hoisting for transportation and site erection.
.8 When necessary, design the insulated panels to include means of hoisting for transportation and site erection.
.9 Design the prefabricated, insulated cladding panel in such a way as to be capable to interface with all other components of the exterior wall systems.
.10 All interfaces with the prefabricated insulated cladding panel shall be free of any loose materials and cracks greater than 1 mm (1/24") in width, and free of surface contamination, including (but not limited to): dirt, form release agents, efflorescence, oil and chalkiness.

.5 Air/Vapour/Moisture Resistive Barrier
.1 The air/vapour/moisture control shall be designed using the specified, designated control membrane. Continuity of these membranes shall be maintained at all wall and floor interfaces, control joints and expansion joints.
.2 The use, location and performance of the air barrier shall be determined by the design professional.
.3 The use and location of the vapour retarder within the wall assembly shall comply with the requirements of Part 5 of the National Building Code (NBC) of Canada and/or the applicable provincial or territorial building codes.
.4 Water Resistive Barrier
.1 A ready-mix, 1 or 2 components, polymer-based water resistive barrier which can be roll, spray or trowel applied in a continuous layer over the substrate.
.2 All sheathing and/or water damage susceptible substrates shall be protected with the specified water resistive barrier and as shown on the drawings.
.3 The designated water resistive barrier system shall include the specific sheathing joint transition membrane.
.4 The water resistive barrier shall be applied in conformance with the exterior insulation and finish system manufacturer's Instructions.
.5 The continuity of water resistive barrier shall be maintained across windows, openings, joints and all other wall interfaces.
.6 The second plane of protection for moisture management shall be made using the specified exterior insulation and finish system's water resistive barrier and drained air space.
.7 The drained air space behind the insulation cladding panel, as provided by the connectors of the panel to the substrates and/or by the GDDC insulation shall remain unobstructed and shall terminate in such a way as not to obstruct the drainage of any incidental moisture to the exterior.

.6 Air/Vapour/Moisture Transition Membrane
.1 The continuity of the air/vapour/moisture control elements shall be maintained across joints, windows, openings and all other wall interfaces using the specified transition membranes.

.2 Through wall penetrations and openings shall be sealed to the water resistive barrier with transition membranes.
.3 Transition membranes shall be installed at all movement joints, roof junctions and window and door interfaces.
.4 Transition membranes shall be installed in conformance with manufacturers' instructions.
.5 Transition membranes shall be as listed in Part 2, "Products" of this specification. No other generic transition membranes should be permitted.

SPEC NOTE: Allowance for use of generic transition membranes could result in membranes that may not be compatible with the exterior insulation and finish system's adhesives.

.7 Insulation
.1 The design of the thermal resistance of the wall assembly 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 or the equivalent requirements of the related applicable provincial or territorial codes. The design of the of the inboard/outboard insulation of the wall assembly shall be in conformance with minimum ratio of outboard to inboard thermal resistance of Article 9.25.5.2 of Division B of the NBC 2015.
.2 The design of the of the thermal resistance of the wall assembly must be in accordance with the requirements of the National Energy Code of Canada for Buildings (NECB) or the equivalent requirements of the related applicable provincial or territorial codes. The insulation type and thickness shall be designed with respect to the minimum effective thermal resistance and continuous insulation requirements of the NECB or the equivalent requirements of the related applicable provincial or territorial codes.
.3 The exterior insulation and finish system can provide additional thermal insulation to the wall assembly with no detrimental effects if properly installed with knowledge of the existing wall configuration and performance.

SPEC NOTE: The thermal resistance requirements for the Effective Thermal Resistance (E_{eff}) and Continuous Insulation (CI) vary depending on building occupancy, climatic zone and structural substrate components. Consult the exterior insulation and finish system's manufacturer for assistance and recommendations on the thickness of insulation boards that would be required to meet the project's specific thermal energy requirements.

.8 Code-related Fire Protection
.1 The insulated building panel components shall conform to ULC design No. EW-21.
.2 The insulated cladding panel is intended to be used in combustible or noncombustible constructions, where allowed by the Code through conformance to Article 3.1.5.5., Article 3.2.3.7. and Clause 3.2.3.8(1)(b) of Division B of the National Building Code (NBC) of Canada and/or the equivalent requirements of the related applicable provincial or territorial codes.
.3 Where required to meet the requirements of Article 3.1.5.5 of Division B of the of the National Building Code (NBC) of Canada and/or the equivalent requirements of the related applicable provincial or territorial codes, the compliant prefabricated, insulated cladding panel shall be listed with an accredit 3rd party certification organization for its conformance to CAN/ULC-S134, "Standard Method of Fire Test of Exterior Wall Assemblies".
.4 Where required to meet the requirements of Clause 3.2.3.8(1)(b) of Division B of

the National Building Code (NBC) of Canada, and/or the equivalent requirements of the related applicable provincial or territorial codes, the compliant prefabricated, insulated cladding panel shall be listed with an accredit 3rd party certification organization for its conformance to the requirements of Clause 3.2.3.8(1)(b) when tested to CAN/ULC S101 "Standard Methods of Fire Endurance Test of Building Construction and Materials, and CAN/ULC S114 "Standard Method of Test for Determination of Non-Combustibility in Building Materials".

SPEC NOTE: Fire protection requirements are subject to provincial variations, refer to specific provincial fire protection code compliance requirements for specific allowances/limitations that may apply.

SPEC NOTE: Refer to manufacturer's fire protection code compliance report for specific limitations that may apply.

.9 Impact Resistance

.1 Design professional shall design the building façade to the desired Impact Resistance Levels that could be expected at various sections of the façade.

.2 The required impact resistance level may vary for the various sections of the façade, based on the type, level and frequency of exposure to expected energy levels associated to impact loads. Sufficient details on architectural plans and drawings shall demonstrate compliance to the required Impact Resistance Level of the exterior insulation and finish system.

.3 Table 1.5.9 below shall be utilized to establish and to specify the Impact Resistance Levels of the exterior insulation and finish system.

Table 1.5.9 – Impact Resistance in accordance with ASTM E 2486

Impact Resistance Classification	**Reinforcing Mesh(1)(3)(4)**			**Impact Resistance**	
	Layer 1	Layer 2	Layer 3	Retention of Physical Properties (No Cracks / Damage)	Retention of Performance (No Breakage of Reinforcing Mesh)
Standard Impact Resistance(2)	Standard Mesh	n/a	n/a	3 N.m	10 N.m
Medium Impact Resistance	Intermediate Mesh	n/a	n/a	8 N.m	15 N.m
High Impact Resistance	Standard Mesh	Standard Mesh	n/a	13 N.m	20 N.m
Ultra High Impact Resistance	High Impact Mesh	Standard Mesh	n/a	20 N.m	30 N.m
Extreme Impact Resistance	High Impact Mesh	High Impact mesh	Standard Mesh	25 N.m	40 N.m
(1) Each layer of reinforcing mesh shall be fully embedded in the base coat and allowed to individually cure.					

(2) "Standard" is the minimum mesh grade that could be used in conjunction with EPS-based EIFS.
(3) Refer to section 2.7 of this specification for reinforcing mesh details.
(4) Other combinations of reinforcing mesh layers may be utilized to achieve the desired Impact Resistance Level based on confirmed tested performance by accredited laboratory.

SPEC NOTE: Ultra High Impact Resistance shall be provided to a minimum height of 2.0 meters above finished grade and at all areas accessible to pedestrian traffic and/or exposed to abnormal impact loads. Refer to manufacturer's guidelines for the recommended Impact Resistance Levels relative to the building code occupancy classification.

.10 Design Details at Terminations
- .1 The prefabricated, insulated cladding panel shall not be used on wall surfaces subject to continuous or intermittent water immersion or hydrostatic pressure.
- .2 The prefabricated, insulated cladding panel shall be terminated a minimum of 12.7 mm (1/2") from adjoining materials at interfaces for sealant applications.
- .3 Ensure the use of higher-grade glass reinforced mesh for higher impact resistance at locations indicated on architectural drawings.

.11 Projections and Reveals
- .1 Conform with the following guidelines for minimum thickness of system's insulation when reveals form part of façade aesthetics:
  - .1 When three-dimensional architectural designs are desired by cutting into the insulation, a minimum thickness of 25 mm (1"), exclusive of any pattern or drainage grooves cut into the back of the insulation shall be maintained.

SPEC NOTE: The use of three-dimensional architectural designs by cutting into the insulation is a common practice and an ideal feature of the exterior insulation and finish system. When designing for such aesthetic reveals the overall thickness of the system's selected insulation shall be equal or greater than "depth of reveal + 25 mm + 10 mm GDDC". Thicker insulation can be used to accommodate deeper reveals.

.12 Sealant System
- .1 Joints in exterior insulation and finish system shall be sealed using an elastomeric sealant with a closed-cell foam backer rod or bond breaker tape, as specified in Section 07 90 00 and as tested to ASTM C1382.
- .2 Minimum joint width shall be four times greater than the anticipated range of movement. Sealant shall be applied in a width to depth ration of (4:1), (3:1). (2:1) as recommended by the Sealant manufacturer.
- .3 Sealant installation shall conform with the requirements of ASTM C1481.

SPEC NOTE: Recommended joint width is 19 mm (3/4") for expansion joints, however, site and design conditions may require the nominal width to vary.

.13 Expansion and Control Joints
- .1 Seal all required control joints and expansion joints of the structure.

.14 Expansion and Termination Joints

.1 Provide two stage sealant joints at all expansion and termination joint locations. The inner joint seal is not required if the water resistive barrier system is continuous behind the outer joint seal and /or penetrations.

.2 Sealant Joint Venting

All two stage sealant joints shall be vented:

.1 Horizontal joints shall be vented at not greater than 1.2 m (4'-0") on center.

.2 Vertical joints shall be vented at not greater than 3 m (10'-0") on center and/or at not greater than 50 mm (2") below the intersection of vertical and horizontal joints.

SPEC NOTE: The designer shall determine the spacing and amount of drainage and/or venting required for a particular system. Note, the venting is only required at points where gravity-induced drainage is expected to occur, hence, roof parapets and/or the underside of window sill flashing would not require sealant vents.

.3 Expansion joints are required at the following locations:

.1 At movement joint locations within the substrate.

.2 At building movement joint locations.

.3 At floor lines of all wood frame structures and as required by the structural design of other framing types.

.4 At junctions with different cladding materials and components.

.5 At changes in roof line, building shape or structural system.

.6 At changes in substrate materials.

.7 At all other locations specified or indicated on drawings

.4 Termination joints are required at the following locations:

.1 At windows, doors and through-wall penetrations interfaces.

.2 200 mm (8") above finished grade.

.3 50 mm (2") above roofing system.

.15 Flashing

.1 Provide corrosion-resistant flashing at all roof-wall intersections, windows and door heads and sills, decks, balconies, chimneys, parapet walls, projecting features and other areas as necessary to direct water to the exterior and to prevent water entry behind the cladding.

.2 Flashing must be installed in accordance with section 07 60 00 and the applicable building codes.

.3 Flashing shall have a slope of not less than 6% towards the exterior, lap not less than 10 mm (3/8") vertically over the building element below, terminate in a drip offset not less than 5 mm (3/16") outward from the outer face of the building and terminate at each end with an end-dam.

.16 Finish

.1 The design professional shall assess the design of the building façade to the desired finish textures and colours that could be expected at various sections of the façade.

.2 Where the type of texture and the intensity of the selected colours include vibrant, accent and / or mass tone colours that are more susceptible to UV degradation, the designer shall specify the use of Durex Kolor Gard Architectural Coatings to augment and heighten the colour fastness.

.3 Sufficient details / notifications on architectural plans and drawings shall demonstrate the required specialized finish texture and colour of the exterior insulation and finish system.

1.6 SUBMITTALS

.1 Product Data
- .1 Submit the prefabricated, insulated cladding panel system specifications and individual component data sheets to show compliance to the intent of the design specifications, and installation instructions.
- .2 Submit approvals and/or evaluations applicable to the system and/or components to be installed.

.2 Shop Drawings
- .1 Submit shop drawings in accordance with requirements specified in Division 1.
- .2 Clearly indicate dimensions, tolerances and materials in large-scale details for terminations, drainage/venting, description of related and abutting components and elevations of units with locations of expansion joints, control joints, and reveals.
- .3 Each shop drawing submitted shall bear the signature and stamp of a qualified registered and licensed professional engineer

.3 Samples
- .1 Prior to application of mock-up, submit duplicate 600 mm x 600 mm (24" x 24") representative samples of the integrated building system (IBS), including steel stud, sheathing board, air barrier, insulation, reinforcing mesh, colour and texture of the coating finish in accordance with the requirements of Division 1.

.4 Mock-Up
- .1 Provide the owner/consultant with a mock-up demonstrating the integrated building system's components and methods of attachment and typical connections at different interfaces.
- .2 The mock-up shall be constructed as per drawings and specifications to dimensions and in location specified by the Designer.
- .3 The mock-up system's component shall include the water resistive barrier, adhesive, insulation, reinforcing mesh, base coat and finish coats that would include each colour and texture to be used.
- .4 The Mock-up shall serve for initial review purposes by the Consultant and when accepted shall represent the minimum standard for work and quality.
- .5 The mock-up shall be prepared with the same products, components, tools, techniques and details required for the actual project.
- .6 The approved mock-up shall be available at all time at the jobsite and shall form the basis for acceptance for the remainder of the project.
- .7 Accepted mock-up may remain as part of the work.

.5 Closeout Submittals
- .1 Provide maintenance, repair and cleaning procedures for the integrated building system (IBS) work for incorporation into Maintenance Manual specified in Division 1.
- .2 Provide the integrated building system (IBS) material warranty as per section 1.10.

.3 Provide identification labels of colour batch numbers, water resistive barriers, adhesives, base coat, finish coats and reinforcing mesh used.

1.7 QUALITY ASSURANCE

.1 Qualifications (General)
- .1 All prefabricated, insulated cladding panel system components shall be supplied by Durabond Products Limited.
- .2 The fabricator of the prefabricated, insulated cladding panel system shall be authorized by Durabond Products Limited and knowledgeable in such fabrication.

.2 Qualifications of Applicator
- .1 Work of this Trade shall be executed by a qualified fabricator/installer, approved by Durabond Products Limited. The prefabricated, insulated cladding panel system shall be installed by authorized installers, knowledgeable in such installations, and who would have been trained by Durabond Products Limited on the most recent installation procedures of this type of work and will have proper equipment and skilled personnel to expediently complete of this trade in an efficient and very best workmanship manner.

.3 Manufacturer's Supervision and Installer
- .1 Arrange for Durabond Products Limited to have a qualified technical representative visit the site, prior to commencement of work, to discuss with the General Contractor, Installer and Architect, the installation procedures to be used in order that alternative recommendations may be made to Architect should adverse conditions exist.
- .2 Arrange for the qualified technical representative to visit the site at regular intervals during installation and upon completion of work to ensure adherence to specifications and to check quality of completed work.
- .3 The above supervision shall be at no extra cost to the Owner.

1.8 DELIVERY, STORAGE, HANDLING & PROTECTION

.1 Transport, handle and store insulated cladding panel system units by approved methods to prevent damage, such as chipping, cracking, distortion and/or breaking.

.2 Store prefabricated units on pallets raised above the ground. Protect the prefabricated units from weather, and where possible store units in a dry, waterproof location.

.3 Provide protective coverings to protect the prefabricated units from damage due to inclement weather and other construction work.

1.9 PROJECT/SITE CONDITIONS

.1 Do not proceed with installation of prefabricated units immediately prior to, during nor immediately after inclement weather conditions, or when wet weather conditions are anticipated within 24 hours after installation.

.2 Proceed with work only when surfaces and conditions are satisfactory for production of a flawless and to the perfection installation. Consult system's manufacturer for recommendations should adverse conditions exist.

1.10 WARRANTY

.1 The warranty period stipulated in the General Conditions of the Contractor shall be extended as follows:
- .1 The system is eligible for a manufacturer's warranty from the date of substantial completion, upon written request, against defective material. For full applicable warranty details contact the system manufacturer.
- .2 The manufacturer warranty is effective only when materials and workmanship comply with this specification.
- .3 The system manufacturer does not warrant workmanship.
- .4 The system applicator shall warrant workmanship separately against faulty workmanship.

SPEC NOTE: Substitution of materials and/or components specified in this specification shall void the manufacturer's warranty.

PART 2: - PRODUCTS

2.1 MANUFACTURER

.1 All components of the Durex® Panelite insulated cladding panel system shall be manufactured, supplied and/or distributed by Durabond Products Ltd. No substitution or addition of other materials shall be permitted. Fabrication and installation of the units shall be executed by locally approved fabricators and installers.

2.2 LIGHT-GAUGE STEEL FRAMING (LSF), TRACKS AND BRACINGS

.1 Carbon steel framing sections, tracks and bracings shall be cold-formed from sheet steel meeting the requirements of ASTM A446, metallic-coated with zinc or aluminum-zinc meeting the requirements of ASTM A 653 and ASTM A792 respectively. Galvannealed sheet steel components shall have a zinc coating not less than the G90 [Z275] coating designation, or a 55% aluminum-zinc coating not less than the AZM150 coating designation.

.2 Stainless steel components, if used shall be made from austenitic Stainless Steel conforming to ASTM A 666.

2.3 CONNECTION ANGLES AND ANCHORS

.1 Connection angles, anchors and plates used to secure the integrated building system units to the structural framing shall have a zinc coating not less than 610 g/m^2.

.2 Stainless Steel connection angles and anchors, if used shall be made from austenitic Stainless Steel austenitic type, Grade 304 or 316 in compliance with ASTM A 167 and ASTM A 666 standards.

2.4 FASTENERS FOR CONNECTION ANGLES AND ANCHORS

.1 Fasteners used in conjunction with the connectors, angles or plates shall have a corrosion protection at least equivalent to the said components.

2.5 WATER RESISTIVE BARRIER (WRB)

.1 Durex® Flexseal Membrane, a self-adhered, modified bituminous membrane, consisting of a styrene-butadiene-styrene (SBS) rubberized asphalt compound which is integrally laminated to a tri-laminated 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 (40 mil) and available in rolls 910 mm (36”), 450 mm (18”), 300 mm (12”), 225 mm (9”), 150 mm (6”), 100 mm (4”) wide and 22.9 m (75’) long.

.2 Durex® Flexseal Membrane VP, a self-adhered, vapour permeable, 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 0.6 mm (24 mil) and available in rolls 950 mm (37”), 300 mm (12”), 230 mm (9”), 150 mm (6”) wide and 30 m (98.4’) long.

.3 Durex® AirStop, a ready to use, single component, silicone modified acrylic copolymer WRB/Air barrier.

SPEC NOTE: All Durex® Flexseal Membrane side and end lap joints shall overlap a minimum of 50 mm (2”), while Durex® Flexseal Membrane VP side lap joints shall overlap a minimum of 50 mm (2”) and end lap joints a minimum of 75 mm (3”).

SPEC NOTE: Durex® Flexseal Membrane and Durex® Flexseal Membrane VP shall be installed in a single overlap formation to provide a continuous moisture barrier to flash out any incidental water intrusion.

SPEC NOTE: The water resistive barrier system may also be designed to act as the wall assembly air barrier and/or vapour barrier material as determined by the consultant of the wall assembly.

SPEC NOTE: For selection of appropriate water resistive barrier please consult your Durabond Products Ltd. representative.

2.6 TRANSITION MEMBRANE

.1 Durex® EIFS Tape, a 30 mil thick, self-adhering, Styrene Butadiene Styrene (SBS) modified rubberized asphalt membrane with a polyester top surface. Available in rolls 914 mm (36”), 457 mm (18”), 225 mm (9”), 152 mm (6”) and 102 mm (4”) wide. Durex® EIFS Tape requires the use of Durex® Flex-Seal Primer for proper adhesion.

.2 Durex® EIFS Tape Super Stick TM, a 17 mil, self-adhering, high performance tape with a polyester fabric top layer. Available in rolls 914 mm (36”), 457 mm (18”), 225 mm (9”), 152 mm (6”) and 102 mm (4”) wide. Durex® Super Stick TM requires the use of Durex® Flex-Seal primer for proper adhesion.

.3 Durex® Flex-Seal Membrane, a 40 mil thick, self-adhering, rubberized asphalt membrane with high density cross-laminated polyethylene reinforcement. Available in rolls 914 mm (36”), 457 mm (18”), 225 mm (9”), 152 mm (6”) and 102 mm (4”) wide. Durex® Flex-Seal Membrane requires the use of Durex® Flex-Seal Primer.

SPEC NOTE: Durex® Flex-Seal Primer, a primer specifically designed to enhance the adhesion of Durex® Flex-Seal Membrane and Durex® EIFS Tape on porous surfaces and cementitious coatings at temperatures above -30°C. It is composed of SBS synthetic rubbers, adhesive enhancing resins and volatile solvents. Durex® Flex-Seal Primer can be used on exterior gypsum boards, wood, metal and concrete.

2.7 INSULATION ATTACHEMENT

.1 Hot-dip galvanized metal sections and tracks, conforming to ASTM A 446 and CAN.CSA G164, embedded in the EPS insulation based on the design analysis requirements.

2.8 INSULATION

.1 Durex® "Quantum Select EPS": A Type I, Type II or Type III expanded polystyrene (EPS) insulation, conforming to CAN/ULC S701, measuring 1.2 m (4'-0") by 0.6 m (2'-0") and a minimum thickness of 50 mm (2"), total thickness as indicated on drawings. The board is pre-machined with rectangular drainage channels parallel to the short edge of the board to ensure vertical alignment of the channels that is required for positive drainage. The drainage channels are 50 mm wide, 50 mm apart, with a depth not less than 10mm (3/8") and as required by the project specifications and/or the drawings.

SPEC NOTE: Thicker or thinner insulation thicknesses could be used depending on specific project's requirements. Consult manufacturer for project-specific thickness requirements.

SPEC NOTE: Durex® Panelite insulated cladding panel system based on the Durex® "Quantum Select" EIFS, using up to 152 mm (6") of Durex® "Quantum Select EPS" has been successfully tested in compliance with Article 3.1.5.5., Article 3.2.3.7. and Clause 3.2.3.8(1)(b) of Division B of the National Building Code (NBC) of Canada and the equivalent requirements of the related applicable provincial or territorial codes.

2.9 REINFORCING MESH

.1 Durex® Detail Mesh: A nominal 152 g/m^2 (4.5 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre mesh, supplied in 241 mm (9.5 in) wide by 45.7 m (150 ft) long rolls. Used for standard back wrapping and aesthetic detailing applications.

.2 Durex® Adhesive Detail Mesh. A nominal 152 g/m^2 (4.5 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 241 mm (9.5 in) wide by 45.7 m (150 ft) long rolls. Used for corner reinforcement and aesthetic detailing applications.

.3 Durex® Standard Mesh (4.3 oz): A nominal 146 g/m^2 (4.3 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 965 mm (38 in) wide by 45.7 m (150 ft) long rolls. Used for application over the field of the wall, providing standard impact resistance.

.4 Durex® Standard Plus Mesh (5.0 oz): A nominal 170 g/m^2 (5.0 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 965 mm (38 in) wide by 45.7 m (150 ft) long rolls. Used for application over the field of the wall, providing a medium impact resistance.

.5 Durex® Intermediate Mesh (6.0 oz): A nominal 203 g/m^2 (6.0 oz/yd^2), flexible, open-

weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 965 mm (38 in) wide by 50 m (150 ft) long rolls. Used for application over the field of the wall, providing a moderately high-duty impact resistance.

.6 Durex® Intermediate Plus Mesh (11.0 oz): A nominal 373 g/m^2 (11.0 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 965 mm (38 in) wide by 22.8 m (150 ft) long rolls. Used for application over the field of the wall, providing an intermediate high-duty impact resistance.

.7 Durex® High Impact mesh (15.0 oz): A nominal 509 g/m^2 (15.0 oz/yd^2), flexible, open-weave, alkaline resistant glass fibre adhesive mesh, supplied in 965 mm (38 in) wide by 22.8 m (75 ft) long rolls. Used for application over the field of the wall, providing a high-duty impact resistance.

.8 Durex® Ultra Impact mesh (21.0 oz): A nominal 695 g/m^2 (21.0 oz/yd^2), flexible, open-weave, alkaline-resistant glass-fibre adhesive mesh, supplied in 965 mm (38 in) wide by 22.8 m (150 ft) long rolls. Used for application over the field of the wall, providing an ultra-high-duty impact resistance.

SPEC NOTE: All areas requiring Impact Resistance Levels higher than "standard", as defined by Table 1.5.8 of this specification, shall be detailed in the project architectural drawings and shop drawings where applicable and described in the contract documents clearly identifying the Impact Resistance Classification, inclusive of the specific layers of reinforcing mesh applicable.

2.10 BASE COAT

.1 Durex® Uniplast, a two-component polymer-modified cementitious base coat mixed with Acrybond S, a water-based 100% acrylic polymer additive in a ratio of 1 bag Durex® Uniplast to 5 l of Durex® Acrybond S.

.2 Durex® Monobase, a single component, polymer-based cementitious base coat which is mixed with water in a ratio of 1 bag Durex® Monobase to 5-6 l of potable water.

.3 Durex® Flexcrete, a two component, polymer-based cementitious base coat, mixed with Flexcrete B in 1:1 ratio.

SPEC NOTE: Where allowed by the applicable code through conformance to the prescribed fire protection requirements, Durex® Flexcrete, a two component, polymer-based cementitious base coat could be used as a base coat in the Durex® "Insulite Select" system. Consult your Durabond Products Ltd. For further assistance in the selection of the appropriate base coat.

2.11 PRIMER

.1 Durex® Brush Coat Primer, a water-based, 100% acrylic coating, colour-tinted to suit the colour of the final finish coat.

SPEC NOTE: Except for special finishes, the Primer is an optional component of the EIFS where it is usage is recommended for providing uniform substrate absorption and finish colour.

2.12 FINISH COAT

.1 Durex® Architectural Coatings, Classic Series, a 100% acrylic, water-based, multi-coloured, textured, protective coating. (Colour and texture to be selected)

.2 Durex® Architectural Coatings, Premium Series, high build, multi-coloured, protective and decorative coating consisting of coloured quartz aggregates and oversized mica flakes embedded in a clear 100% acrylic resin, textured, protective coating. (Colour and texture to be selected)

.3 Durex® Architectural Series, Artisan Series, a 100% acrylic, water-based, high-build, multi-coloured, textured with special patterns and artistic releifs, protective coating. (Colour, texture and finish pattern to be selected)

.4 Durex® Architectural Series, Kolor Gard Series, a 100% acrylic, Fade Resistant Decorative High Build Protective Textured Coating for Accent & Bright Colours. (Colour, texture and finish pattern to be selected)

.5 Durex® Architectural Coatings, Elastomeric FX Series, a 100% acrylic, water-based, high-build, high flexibility, multi-coloured, textured, protective coating. (Colour and texture to be selected)

SPEC NOTE: In cases where the selected colours of the finish texture are of a vibrant accent and/or mass tone nature (Colours that require organic pigments in order to attain and retain the colour intensity), the designer is encouraged to consider specifying, exclusively, the use of Durex® Kolor Gard Series Coatings to augment and heighten the colour fastness of bright and mass tone coloured finishes. This engineered augmented UV fade resistance is limited to the Kolor Gard line of finishes that may result in additional application requirements that should be considered prior to tender.

2.13 TRIM ACCESSORIES

.1 As selected by the Consultant and recommended by Durabond Products Ltd.

2.14 ACCESSORY PRODUCTS

.1 Sealant: a low modulus sealant, as recommended and approved by Durabond Products Ltd. Standard colour shall be selected by consultant.

.2 Foamed-in-place Insulation: Class 1, single or two components, polyurethane foam, moisture cured with flame-spread rating of ≤ 25, fuel contribution 0 and smoke developed ≤ 20, as per (ULC S710.1). Must be ozone friendly and containing no fluorocarbons and have a density ≥ 27.2 kg/m^3 (1.75 lb/ft^3) and a minimum "RSI" value of 0.91 per 25 mm ("R" value of 5 per inch) thickness.

2.15 EQUIPMENT

.1 All mixing shall be carried out with a clean, rust-free paddle mixer that shall minimize air entrainment, powered by a power-drill at 400-500 rpm maximum speed.

.2 Hot knife or hot groover complete with all related accessories such as cutting blades and appropriately sized sleds

.3 Metal or paper rasps with a nominal size of #15 grit.

.4 Metal trowels, hawks, utility knives, corner trowels and plastic floats

PART 3: - EXECUTION

3.1 EXAMINATION

.1 Examine the structure to receive Durex® prefabricated, insulated cladding panel system for defects and out of tolerance components which will adversely affect execution and quality of work.

.2 Report in writing to Architect all adverse conditions which will be detrimental to work of this trade. Such conditions shall include discrepancies in panel sizes, structure irregularities and variances from reviewed shop drawings.

.3 Do not start work until unsatisfactory conditions have been corrected.

.4 Commencement of work shall indicate acceptance of all conditions.

3.2 FABRICATION GENERAL

.1 Fabricate Durex® prefabricated, insulated cladding panel system to suit field conditions, and specified dimensions in full conformance with the reviewed shop drawings.

.2 Fabricate Durex® prefabricated, insulated cladding panel system in sufficient time and in proper sequence to ensure adequate curing before shipping and installation.

.3 Mark the back or on the unexposed edge of each prefabricated unit with an identification mark that would correspond to the location of the unit on related shop drawings.

.4 Mark each prefabricated unit with date of fabrication.

.5 Provide all openings and reveals where indicated.

3.3 CUTTING OF STEEL SECTIONS AND TOLERANCES

.1 Inspect and verify that all steel sections are in conformance with the reviewed shop drawing requirements for dimensions, thickness and galvanization prior to commencing construction of panels.

.2 Refer only to reviewed shop drawings for guidance in dimensions and tolerances for the

construction of the panels.

.3 Make shop drawings readily available, at all time, to fabricating personnel, during fabrication by keeping one original set of reviewed shop drawings at the fabricator's construction facility.

.4 Prefabricated panels shall conform to the following dimensional tolerances:
- Length +3 mm (1/8")
- Width +6 mm (1/4")
- Thickness +3 mm (1/8")

3.4 FABRICATION OF STEEL SECTIONS FRAMEWORK

.1 Fabricate the steel sections framework in jigs with framing members laid out as per shop drawings.

.2 Touch up all welded area completely with corrosion preventive Zinc -rich primer.

.3 Fabricate steel sections framework to conform with specified tolerances, true and straight.

.4 Discard all bent or damaged framing sections and components.

.5 Handle and store framework with care to prevent damages to any framing member or any welded joint.

3.5 APPLICATION

.1 General:
- .1 Supply experienced and qualified installers and applicators to carry out the work.
- .2 Mix materials in accordance with manufacturer's instructions.
- .3 Install the prefabricated insulated cladding panel system in strict accordance with the approved mock-up and manufacturer's printed instructions (and reviewed shop drawings).

SPEC NOTE: Correlate requirements for shop drawings with Article 1.6.

.2 Insulation Board
- .1 Install insulation board within the steel steel framing in running bond pattern. Pre-cut boards to fit snugly around openings designed in the panels. Butt boards to moderate tight fit.
- .2 Place insulation boards into place, beginning installation at one end, from the designed bottom baseline of the panel to form an uninterrupted surface. Ensure full thermal barrier coverage throughout.
- .3 Organize insulation board placement to align vertical edges with steel framing members or appropriate support system.
- .4 Butt the insulation boards to a moderately tight fit, avoiding gaps. Fill gaps with pieces cut to fit or fill with foamed-in-place polyurethane insulation. Ensure the thermal barrier is continuous throughout.
- .5 Where applicable, mark-out alignment and cut reveals in insulation boards as per

architectural drawings. Ensure reveals are true to size, straight, plumb and level throughout.

.6 Rasp the entire insulation surface and edges to a tolerance of not more than 3 mm (1/8") in 3 m (10').

.3 Base Coat and Reinforcing Mesh

.1 Ensure that the insulation boards have been rasped and the surface is dry and free of loose insulation, dirt, yellowing from UV exposure, etc. and that detail work has been completed.

.2 At all areas where detail reinforcing mesh has been installed, apply a layer of base coat to the exposed edges and face of the insulation boards. Pull the detail reinforcing mesh into the base coat so that it is fully embedded. Using an edging tool, smooth the corner to render it square.

.3 Apply a layer of base coat over the insulation surface, not less than 2 mm, applying sufficient pressure in the trowelling process to ensure full contact with the insulation. Immediately place the reinforcing mesh onto the wet base coat and trowel the mesh from the centre to the edges, filling all voids in the mesh until the mesh is completely embedded.

.4 Provide high impact reinforcing mesh where indicated on drawings. Tightly abut the edges; do not lap high impact mesh. Embed the mesh into the wet base coat and trowel the mesh from the centre to the edges, filling all voids in the mesh until the mesh is completely embedded. Allow the high impact mesh-reinforced base coat to dry before applying the successive standard reinforcing mesh.

.5 Install the reinforcing mesh tight, straight and free of wrinkles, ripples and waves.

.6 Embed the standard reinforcing mesh into the base coat with joints overlapped a minimum of 102 mm (4") and double wrapping inside and outside corners a minimum of 203 mm (8").

.7 Overlap detail reinforcing mesh with standard reinforcing mesh 100 mm (4") at all locations where detail reinforcing mesh has been installed.

SPEC NOTE: When applying high impact reinforcing meshes, do not overlap high impact mesh, the joints between meshes shall just be tightly butted.

SPEC NOTE: The required backwrap of the insulation boards shall be made with standard or intermediate meshes only. Do not backwrap high impact reinforcing meshes.

.4 Final Base Coat

.1 In hot, dry weather, if the scratch coat surface is exceptionally dry, lightly dampen the surface with a fog mist of clean potable water. Do not over-saturate with water, as it will impair the bonding of the base coat.

.2 Trowel apply the base coat, applying sufficient pressure to ensure full bond with the base coat.

.3 Use a straight edge tool to featheredge the surface and bring it to a straight, even and true surface.

.4 Total thickness of base coat shall be achieved at an application rate not less than 7.2 kg/m^2 (1.5 lb/ft^2).

.5 When the base coat has taken initial set, use a wood or sponge float and work the surface with light circular motions to remove all high points and to fill low points.

.6 Final surface shall be smooth, straight and true to a tolerance of not more than

3.2 mm in 3 m (1/8" in 10'-0"). Surface shall be free of trowel marks, irregularities and visible mesh pattern.

.7 Allow a minimum of 3 days for curing and drying.

.5 Finish Coat Primer

.1 Evenly apply the primer throughout with a high pile roller at a rate of 2.8 m^2/l (600 ft^2/pail). The substrate shall not be visible through the applied primer.

.2 Avoid excessive build-up in any one area.

.3 Allow minimum 4 hours for curing prior to application of finish coat.

.6 Finish Coat

.1 Apply the System's selected finish coat, within 3 days after application of the system's selected primer. Longer periods may be scheduled between operations provided that the primed surface is kept clean and in good condition.

.2 Apply the selected finish coat in strict accordance with manufacturer's printed instructions for the Selected finish.

.3 Apply the finish coat in such a way as to match the colour and texture of the approved site mock-up.

.4 Do not apply the finish coat onto surfaces that are intended to be caulked.

SPEC NOTE: In cases where the selected colour of the finish texture is of a vibrant, accent and/or mass tone nature for which Durex® Kolor Gard Series have been specified, the applicator shall ensure that the products and their respective application procedures are followed and no substitutions are made in product and/or in application. The engineered augmented UV fade resistance is limited to the Durex® Kolor Gard line of finishes that may result in additional application requirements that should be considered prior to tender.

3.6 LIFTING OF DUREX® PREFABRICATED, INSULATED CLADDING PANEL SYSTEM

.1 The prefabricated insulated cladding panel system shall be hoisted into position for attachment to the framing and substrates with mobile cranes suitable to the individual project's requirements.

3.7 INSTALLATION OF PANELS

.1 Water Resistive Barrier (WRB)/Air Barrier

.1 Apply the selected water resistive barrier/air barrier as per the manufacturer's application instructions, over the entire substrate surface, applying sufficient pressure in the troweling process to ensure full contact with the substrate.

.2 Apply the moisture transition membrane over at all vertical and horizontal sheathing board joints and all sheathing board corners prior to the application of the water resistive barrier.

.3 Ensure the continuity of the WRB/Air Barrier by installing a transition membrane at all locations where substrate materials may change or at openings and penetrations.

.4 Allow a minimum of 24 hours for drying and curing.

.2 Install Durex® prefabricated, insulated cladding panel system in accordance with approved mock-up, Durabond's printed instructions and reviewed shop drawings.

.3 Supply anchor bolts, structural steel inserts, plates and the like to be case into cast-in-place concrete required for the connection or the support of the prefinished panel units to concrete sub-trade for installation. Supply layout drawings locating accurately the position of all cast-in-place items to be installed by Concrete Sub-trade. Check installation prior to pour of concrete.

.4 Provide proper equipment and erect work using labourers skilled in this trade.

.5 Install panels plumb, level and in true alignment with the face of adjacent panels.

.6 Conform vertical and horizontal alignments using 3-point lasers or other equivalent means.

.7 Erect units with joints parallel to the other panels in accordance with design requirements and reviewed shop drawings.

.8 Anchor Durex® Durex® prefabricated, insulated cladding panel system units to the building structure in a manner which will allow the structure to deform due to the acceptable load deflections, inter-storey movements, creep and thermal movements without imparting additional loads to the structure or units.

.9 Where bolted connections are used for installation, tighten bolted connections with equal torque. Secure bolts with lock-washers or lock-weld nut to bolt.

.10 Provide temporary erection anchorage for welded anchorage system.

.11 Clean field welds with wire brush and touch-up with zinc-rich primer.

.12 Remove shims and spacers from joints after fastening but before sealant is applied.

3.8 JOINTS

.1 Provide expansion joints in alignment with building expansion joints.

.2 Install expansion joints at all locations where dissimilar substrates meet.

.3 Install expansion joints at all locations of maximum stress, in the direction as shown on drawings.

.4 All horizontal joints shall be vented by means of the manufacturer's Vent Board and located and spaced at intervals not greater than three stories.

.5 Unless otherwise noted, provide all joint width to be minimum 12 mm (1/2") wide. Maximum joint width shall not 25 mm (1").

SPEC NOTE: As a rule of thumb, fulfill requirements 1 and 2 and then arrange the other requirements to best suit the intended aesthetics of the building.

3.9 SEALANTS

.1 External Seal
  .1 Seal and caulk all joints in the prefabricated, insulated cladding panel system

with the system's specified elastomeric sealant that shall be applied over a compatible closed-cell foam backer rod or bond breaker tape.

.2 Seal and caulk all expansion joints between the exterior insulation and finish system and dissimilar abutting building components.

.3 Apply sealant and/or sealant primer in strict accordance with the sealant manufacturers printed instructions.

SPEC NOTE Apply sealant and/or sealant primer to base coat only.

3.10 SURFACE SEALER (OPTIONAL)

.1 After complete installation of the Durex® prefabricated, insulated cladding panel system apply one coat of surface sealer to the exterior face of the panels. Apply sealer in strict accordance with Durabond's printed instructions.

3.11 SPECIAL CLEANING

.1 Clean off all surfaces and work area of foreign materials resulting from material installation and leave work in clean condition.

.2 Entirely reinstate at this Trade's own expense, any surface not to be coated, but soiled and attributable to this Trade due to spillage, mixing of material or any other cause.

3.12 PROTECTION

.1 Protect the installed Durex® Panelite insulated cladding panel system from damage during construction.

.2 Provide protection of installed materials from precipitation, freezing, excessive heat, dust, and dirt during installation the panel units.

.3 Provide protection to adjacent materials that could be damaged by the system's installation.

.4 Post appropriate warning signs while work is in progress.

.5 Clean off all surfaces and work area of foreign materials resulting from material installation and leave work in clean condition.

END OF SECTION