



Evaluation Report CCMC 14298-R Parex Standard WaterMaster CI

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1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “Parex Standard WaterMaster CI,” when used as an exterior insulation and finish system (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, complies with the National Building Code of Canada (NBC) 2015:

- Clause 1.2.1.1.(1)(a) of Division A, as an acceptable solution from Division B:
 - Sentence 3.1.5.5.(1)⁽¹⁾, Combustible Cladding on Exterior Walls
 - Sentence 5.6.1.1.(1), Required Protection from Precipitation
 - Sentence 5.9.1.1.(1), Compliance with Applicable Standards
 - Subsection 5.9.4., Exterior Insulation Finish Systems
 - Clause 9.25.2.2.(1)(d), Insulation Materials
 - Sentence 9.27.1.1.(5), General (Cladding)
 - Article 9.27.2.1., Minimizing and Preventing Ingress and Damage
 - Clause 9.27.2.2.(1)(e), Minimum Protection from Precipitation Ingress
 - Sentence 9.27.2.3.(1), First and Second Planes of Protection
 - Article 9.27.3.1., Elements of the Second Plane of Protection
 - Subsection 9.27.13., Exterior Insulation Finish Systems

The product has also been deemed to comply with the following standard:

- CAN/ULC-S716.1-12, “Exterior Insulation and Finish Systems (EIFS) – Materials and Systems”

This opinion is based on CCMC’s evaluation of the technical evidence in Section 4 provided by the Report Holder.

(1) See section 4.2., Fire Performance, of this Report.

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,
- an insulation board, and
- a coating system (lamina⁽²⁾).

(2) *The lamina refers to all coats (base and finish) 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 masonry, monolithic concrete walls, or glass-mat gypsum panels over wood or steel framing. Gaps between the sheathing boards of framed walls must not exceed 3.2 mm.

2.2 Water-Resistive Barrier (WRB)⁽³⁾

(3) *The WRB is a coating (application thicknesses are mentioned in Section 2.2.1 below) that is installed to provide a continuous membrane over the substrate and around penetrations and openings to provide, along with other built-in features, the second line of defence against water infiltration into the structure. In order to provide the intended level of protection against water infiltration, the WRB shall be installed in a two-coat application in which the first coat shall have sufficient time to cure before the second coat is applied. The WRB shall be applied in accordance with:*

- *Parex Standard WaterMaster CI Exterior Insulation and Finish System – Canadian Application Guide revised, January 2020;*
- *WeatherSeal Spray & Roll-on technical data sheet;*

The continuity of the second plane of protection across joints and junctions at openings, penetrations and expansion joints shall be maintained through accessories such as self-adhering membranes, tapes, etc. as specified by the manufacturer prior to the installation of these systems.

Should the EIFS be installed adjacent to the WRB of another type of cladding system, the continuity of the WRB between both cladding systems shall be maintained.

2.2.1 Roller- or Spray-applied Coatings

“WeatherSeal Spray & Roll-on” is a ready-to-use, polymer-based wet mix coating supplied in 20-kg pails. “WeatherSeal Spray & Roll-on” is applied with roller or spray in a continuous layer over the non-wood substrate. Apply two coats of 0.2 mm (8 mils) minimum per coat. “WeatherSeal Spray & Roll-on” is applied in combination with Parex 396 Sheathing Joint Tape wrapped around the rough openings (see Figure 2, steel frame example) and also the penetrations and when “WeatherSeal Spray & Roll-on” is applied approximately minimum 150-mm wide centered over the sheathing joints.

2.2.2 Joint, Rough Openings and Penetration Treatments

“Parex 396 Sheathing Joint Tape” is a 102 mm to 223 mm non-woven fabric tape applied embedded in the WRBs mentioned above. “Parex 396 Sheathing Joint Tape” wraps around the rough openings as well as the penetrations. It is also installed over the sheathing joints and applied not less than 125 mm wide centered over the joint.

2.3 Adhesives⁽⁴⁾

(4) *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 on-site,*
- *a wet paste that requires the addition of cement on-site, or*
- *a form that does not require any additives.*

Certain adhesives are also used as base coats, as in the case with all noted adhesives. Consequently, the description of base coat products has been placed in this section.

“Parex 121 Dry Basecoat and Adhesive” is a ready-to-use, polymer-based adhesive and base coat, supplied in 22.7 kg powder bags. The material is mixed on-site with clean potable water (4:1 by weight, dry mix to water). “Parex 121 Dry Basecoat and Adhesive” is applied over the “Parex Insulation Board” or “Parex Geometrically Defined Insulation Board” using a stainless steel, U-shaped, notched trowel and rendered in such a way so as to align the adhesive in vertical ribbons from their beginning point to their end point without crossing over one another. The on centre (o.c.) spacing between the ribbons shall be 65 mm and the size of the notches of the trowel shall be 13 mm in width and 13 mm in depth.

2.4 Insulation

“Parex Insulation Board” is a typical flat stock Type 1 expanded polystyrene (EPS) insulation board.

“Parex Geometrically Defined Insulation Board” is a Type 1 EPS board that has been configured with drainage channels and chamfers to facilitate drainage and drying. The “Parex Geometrically Defined Insulation Board” shown in Figure 1, has an 11 mm chamfer that is cut around the entire perimeter of the board, along with three 25 mm-wide by 11-mm-deep grooves that are spaced equidistantly across the 1 220-mm-wide insulation board.

“Parex Insulation Board” and “Parex Geometrically Defined Insulation Board” are both made from 100% virgin materials and manufactured and packaged by a Parex-approved and licensed manufacturer/molder. The insulation boards are aged in ambient air for a minimum of six weeks or kiln-dried.

“Parex Insulation Board” and “Parex Geometrically Defined Insulation Board” EPS insulation boards shall conform to:

- Annex A, “Expanded Polystyrene (EPS) Thermal Insulation Requirements for Use in Exterior Insulation and Finish Systems (EIFS)” of CAN/ULC-S701-11, “Thermal Insulation, Polystyrene, Boards and Pipe Covering.”
- minimum board thickness of 50 mm,
- maximum board thickness:
 - as designed, when used in combustible construction; and
 - 203 mm where applications are to conform to the requirements of Sentence 3.1.5.5.(1) of the NBC 2015,
- maximum board size is 610 mm × 1 220 mm,
- average density of 16 kg/m³, and
- flame-spread rating is 25–500, per CAN/ULC-S102.2-10, “Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.”

2.5 Synthetic Coating System (Lamina)

The synthetic coating system (lamina) consists of:

- the base coat
- the reinforcing mesh, which is embedded within the base coat,
- a primer (optional), and
- a finish coat.

2.5.1 Base Coat ⁽⁵⁾

The base coat consists of “Parex 121 Dry Basecoat and Adhesive” (see material description in Section 2.3).

As a base coat, the “Parex 121 Dry Basecoat and Adhesive” material is applied over the prepared insulation board covering an area slightly greater than the 1-m width of mesh to be embedded. While wet, mesh is embedded into the base coat and rendered flat, without wrinkle or void. Where mesh pieces overlap within the field of the wall, the required overlap is 75 mm. The base coat is applied in a continuous layer over the surface of the EPS insulation board in approximately 1.6 mm to 2.0 mm thickness.

(5) *The thickness of the base coat required depends on the number of layers and the type of reinforcing mesh used. The base coat thickness is thicker when more than one layer of reinforcing mesh is incorporated into the lamina. The final thickness of the base coat must be sufficient to fully embed the reinforcing mesh in the base coat with no mesh colour visible.*

2.5.2 Reinforcing Mesh

“Parex 355 Standard Mesh” is an alkali-resistant, glass-fibre reinforcing fabric that has a minimum nominal weight of 153 g/m² and is manufactured by Saint-Gobain ADFORS. The mesh is white and is available in 965-mm width. Starter mesh for rendering surface articulations and terminations is available in rolls that are 240-mm wide. The reinforcing mesh comes in the following seven grades, represented in ascending order of strength:

- “Parex 355 Standard Mesh and Parex 356 Short Detail Mesh”, minimum of 153 g/m²;
- “Parex 352 Self-Adhesive Mesh”, minimum of 170 g/m²;
- “Parex 358.6 Standard+ Mesh”, minimum of 200 g/m²;
- “Parex 357 Corner Mesh”, minimum of 307 g/m²;
- “Parex 358.10 Intermediate Impact Mesh”, minimum of 376 g/m²;

- “Parex 358.14 High Impact Mesh”, minimum of 522 g/m²; and
- “Parex 358.20 Ultra High Impact Mesh”, minimum of 680 g/m².

2.5.3 Primer (Optional)

“Parex Primer” is a water-based acrylic coloured primer supplied in 27.2-kg pails. “Parex Primer” is applied by roller or spray to the dry base coat.

2.5.4 Finish Coat

“DPR Acrylic Finishes” are acrylic-based textured finish coats that are supplied in 29.5-kg pails. They are factory-tinted to the desired colour.

The finish coats provide a texture that is governed by the aggregate size and trowel motion used to render the wall surface. The different textures offered and their respective coating thickness are:

- 530 “Swirl Fine” (1.5 mm).
- 531 “Swirl Coarse” (3.0 mm),
- 532 “Multi-Texture” (0.75 mm),
- 533 “Sand Smooth” (0.5 mm),
- 534 “Sand Fine” (1.0 mm), and
- 535 “Sand Coarse” (1.5 mm).

2.6 Parex Standard WaterMaster CI System Elements

Table 2.6.1 “Parex Standard WaterMaster CI” System

System	Substrate	Joint Treatment	WRB	Adhesive	Insulation	Base Coat	Primer	Finish Coat
Parex Standard WaterMaster CI	<ul style="list-style-type: none"> • concrete • glass-mat-gypsum • masonry 	WeatherSeal Spray & Roll-on(1) + Parex 396 Sheathing Joint Tape	<ul style="list-style-type: none"> • WeatherSeal Spray & Roll-on⁽¹⁾ 	Parex 121 Dry Basecoat and Adhesive	<ul style="list-style-type: none"> • Parex Insulation Board • Parex Geometrically Defined Insulation Board 	Parex 121 Dry Basecoat and Adhesive ⁽²⁾	Parex Primer ⁽³⁾	DPR Acrylic Finishes

Notes to Table 2.6.1:

- (1) “WeatherSeal Spray & Roll-on” is not for use over wood sheathings.
- (2) Basecoat is always applied with embedded reinforcing mesh.
- (3) Optional on all systems.

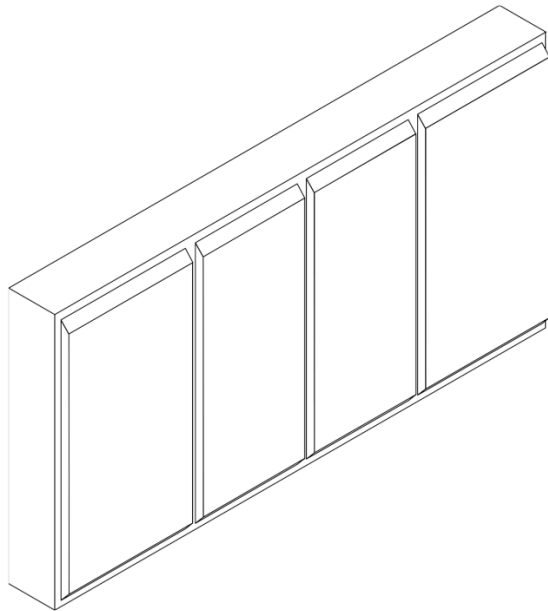


Figure 1. “Parex Geometrically Defined Insulation Board”

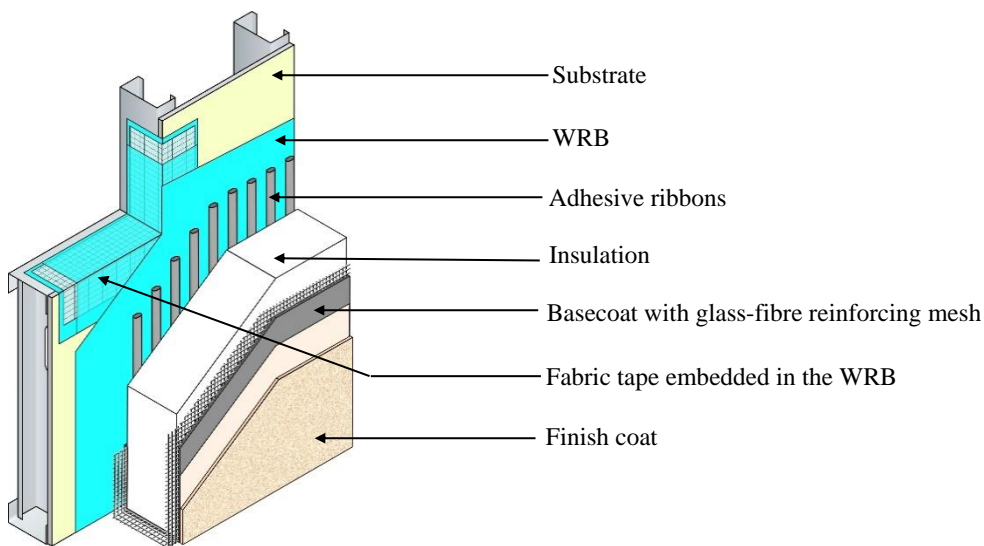


Figure 2. “Parex Standard WaterMaster CI” EIFS

3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the “Parex Standard WaterMaster CI” being used in accordance with the conditions and limitations set out below.

3.1 General

- The products are intended to be used as an exterior insulation and finish wall system applied directly to vertical NBC 2015 compliant walls of concrete masonry, monolithic concrete walls and glass-mat gypsum panel, installed over wood or steel framing.
- Gaps between the sheathing boards of framed walls shall not exceed 3.2 mm.
- The products are acceptable for use on new and existing exterior, vertical walls. The systems are not acceptable for use on weather-exposed horizontal surfaces. (Note: the present limitation does not include protected soffit applications.)

- When the products are part of a prefabricated panel system that incorporates structural components, the structural components shall be designed by a professional engineer or architect in accordance with the manufacturer’s criteria and the requirements of the NBC 2015 based on the edition in effect for the given region.
- The products are not intended for use as a below-grade insulation and finished ground must terminate at least 200 mm below the EIFS panel.
- When the systems are used in new construction, for buildings within the scope of Part 5, Environmental Separation, of Division B of the NBC 2015, the system shall be designed in accordance with the requirements of Article 5.9.4.1., Structural Loads, Heat Transfer, Air Leakage, Vapour Diffusion and Water Penetration, of the NBC 2015.
- The product must be installed according to the manufacturer’s installation manual (“Parex WaterMaster CI Exterior Insulation and Finish System – Canadian Application Guide” (January 2020)) and by a Parex-listed applicator who possesses a valid manufacturer’s education certificate for the “Parex WaterMaster CI” EIFS.
- 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 4°C and 38°C. Previously frozen materials must not be used.
- Wet, finished surfaces must be protected from rain and other moisture sources until sufficiently set and hardened to prevent wash-off or other moisture related damage.

3.2 Water Penetration Control

- Polymeric WRB coating materials must be installed in a two-coat application, regardless of substrate type and application method.
- The continuity of the Parex 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 these systems.
- The product shall 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.
- The notched trowel adhesive ribbons must be conducted in a way as to form clear and parallel drainage paths behind the insulation boards and to avoid the creation of any V-grooves (V-grooves refer to ribbons touching and closing the drainage path). The wet ribbons must be a minimum of 13 mm deep, 13 mm wide and 65 mm on centre.
- The drained airspace behind the insulation boards shall remain unobstructed so as to form a clear drainage cavity behind the insulation board and it shall terminate in such a way as not to obstruct the dissipation of incidental rainwater.
- When used in coastal areas for residential occupancies for buildings falling 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 Sentence 9.27.2.2.(1)(e), Minimum Protection from Precipitation Ingress, of Division B of the NBC 2015. Coastal areas are defined in the NBC 2015 in Sentence 9.27.2.2.(5).

3.3 Condensation Control

- For buildings within the scope of Part 9, Housing and Small Buildings, of the NBC 2015, the design of the inboard/outboard thermal resistance of the systems shall be in accordance with the requirements of Section 9.25., Heat Transfer, Air Leakage and Condensation Control, of Division B of the NBC 2015.
- When used in retrofit construction in sprinklered buildings or buildings with not more than 3 storeys, the possibility of moisture accumulation within the wall construction is mainly a function of 1) the ability of the wall assembly to deflect bulk water entry, and 2) the physical properties of the cladding being installed and its impact on the thermal, air leakage and vapour diffusion characteristics of the existing wall. The potential for moisture accumulation as a result of the addition of materials is very specific to the existing wall construction being retrofitted. Therefore, the installation must be in accordance with Appendix Note A-5.1.2.1(1), Application (Environmental Separation), of Division B of the NBC 2015.

3.4 Cladding Attachment and Structural Considerations

- The products are not suitable for use as structural sheathing for bracing purposes.
- Systems as described in Table 2.6.1 are limited to geographical areas where the Q_{50} wind reference value is < 1.00 kPa and/or where the design limit requirements are within wind-load values expressed within Table 4.1.17.
- Movement joints are required to accommodate expansion and contraction of building materials due to thermal changes, moisture, wind, gravity, vibration and seismic activity. Expansion joints in the cladding must be used in the following situations:
 - at movement joints that occur in the substrate,
 - at any abutment of the system with other materials,
 - where changes in substrate might 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 (may not be required where fully engineered framing and floor systems are used).
- Closed-cell backer rods should be used at expansion joints so that the low-modulus sealant may be installed as per the sealant manufacturer's instructions.
- Glass-mat gypsum sheathing must be in compliance with the requirements of ASTM C 1177/C 1177M-13, "Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing," or have been evaluated by CCMC.
- Masonry and monolithic concrete walls must comply with the requirements of the NBC 2015.

3.5 Fire Protection

- 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.
- When used in noncombustible construction, the polystyrene insulation must be protected from the inside of the building in accordance with Article 3.1.5.15., Foamed Plastic Insulation, as applicable of Division B of the NBC 2015.
- Where allowed by the Code through conformance to Sentence 3.1.5.5.(1), Combustible Cladding on Exterior Walls, of Division B of the NBC 2015, "Parex Standard WaterMaster CI" is acceptable for use on buildings required to be of noncombustible construction, where not more than three storeys in height if unsprinklered, and to an unlimited number of storeys if sprinklered, provided the interior surfaces of the wall assembly are protected by a thermal barrier conforming to Article 3.1.5.15., Foamed Plastic Insulation, of Division B of the NBC 2015. For a detailed description of the compliance of "Parex Standard WaterMaster CI" to the requirements of Sentence 3.1.5.5.(1) of Division B of the NBC 2015, please refer to Intertek fire listing SPEC ID: 44897 and Design No: Prx/WDEIFS 25-01 (please note that back-up wall assemblies covered by the design listing do not include wood framing and wood sheathings and extend to non-combustible substrates only (sheathings such as glass-matt gypsum panel over steel stud, concrete and masonry)).
- 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 Subsections 3.1.11., Fire Blocks in Concealed Spaces and 9.10.16., Fire Blocks, of Division B of the NBC 2015 must be implemented.
- The expanded polystyrene thermal insulation 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."

3.6 Thermal Properties

- When the systems are used in retrofit construction, the addition of thermal insulation onto existing exterior walls will increase the thermal efficiency and air tightness of the wall. Deficiencies in flashing and other elements in the building assembly, including mechanical systems, may result in detrimental effects of moisture accumulation as highlighted in Appendix Note A-9.25.2.4.(3)., Loose-Fill Insulation in Existing Wood-Frame Walls, of Division B of the NBC 2015. As a result, existing exterior walls that are intended to be retrofitted with EIFS must meet the requirements of the NBC 2015.
- The products can provide additional thermal insulation to the wall assembly in retrofit construction with no detrimental effects if properly designed and 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 shall conform to the energy requirements of the applicable building code. The wall system may have to conform to the National Energy Code of Canada for Buildings 2015 at minimum to meet the requirements of the local jurisdictions.
- The polystyrene thermal insulation blocks shall be aged for a minimum of six weeks or kiln-dried before installation in accordance with Annex A “Aging” requirements of CAN/ULC-S701 before cutting into insulation boards.
- 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.
- 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 expanded polystyrene thermal insulation 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.”

4. Technical Evidence

The Report Holder has submitted technical documentation for CCMC’s evaluation. Testing was conducted at laboratories recognized by CCMC. The corresponding technical evidence for this product is summarized below.

4.1 Performance Requirements

Table 4.1.1 Ash Content of EIFS Components

Property		Unit	Requirement	Result
Ash content	WRB (WeatherSeal Spray & Roll-on)	%	Report value	40.2
	Parex 121 Dry Basecoat and Adhesive			83.5
	DPR Acrylic Finishes			50.8

Table 4.1.2 Adhesion of WRB to Substrates Other Than Plywood/OSB

Property			Unit	Requirement No detachment at bonding plane @	Result ⁽¹⁾
Adhesion bond of WRB to concrete	WeatherSeal Spray & Roll-on	dry state	MPa	0.25	0.87
		2 h drying		0.08	0.32
		7 d drying		0.25	0.64
Adhesion bond of WRB to glass mat gypsum panel	WeatherSeal Spray & Roll-on	dry state	MPa	0.25	0.50
		2 h drying		0.08	0.42
		7 d drying		0.25	0.45

Note to Table 4.1.2:

(1) Bonding strength measured at bonding plane between the substrate and WRB.

Table 4.1.3 Adhesion Bond of Adhesive to WRB

Property			Unit	Requirement No detachment at bonding plane @	Result ⁽¹⁾
Adhesion bond	Parex 121 Dry Basecoat and Adhesive to WeatherSeal Spray & Roll-on	dry state	MPa	0.25	0.68
		2 h drying		0.08	0.32
		7 d drying		0.25	0.81

Note to Table 4.1.3:

(1) Bonding strength measured at bonding plane between the WRB and adhesive.

Table 4.1.4 Adhesion Bond of Adhesive to Insulation

Property			Unit	Requirement No detachment at bonding plane @	Result ⁽¹⁾
Adhesion bond	Parex 121 Dry Basecoat and Adhesive to EPS	dry state	MPa	0.08	0.12
		2 h drying		0.08	0.10
		7 d drying		0.08	0.14

Note to Table 4.1.4:

(1) Bonding strength measured at bonding plane between the adhesive and EPS insulation.

Table 4.1.5 Lamina Bond Strength Tests

Property				Unit	Requirement No detachment at bonding plane @	Result ⁽¹⁾
Lamina bond strength	base coat to insulation	Parex 121 Dry Basecoat and Adhesive to EPS	dry state	MPa	0.08	0.12
			2 h drying		0.08	0.10
			7 d drying		0.08	0.14
	finish coat to base coat	Parex 121 Dry Basecoat and Adhesive to DPR Acrylic Finishes	dry state		0.08	0.12
			2 h drying		0.08	0.13
			7 d drying		0.08	0.13

Note to Table 4.1.5:

(1) Bonding strength measured at bonding plane between the EPS insulation and basecoat, and between the basecoat and finish coat.

Table 4.1.6 Water Vapour Transmission of WRB⁽¹⁾

Property	Unit	Requirement	Result
WeatherSeal Spray & Roll-on over glass mat gypsum panel	ng/(Pa·s·m ²)	Report value	586

Note to Table 4.1.6:

(1) Water vapour transmission test was performed by ASTM E96 (Desiccant Method)

Table 4.1.7 Water Vapour Transmission of Lamina⁽¹⁾

Property	Unit	Requirement	Result
Parex 121 Dry Basecoat and Adhesive and Parex DPR Acrylic Finish	ng/(Pa·s·m ²)	Report value	491

Note to Table 4.1.7:

(1) Lamina refers to the base coat, mesh and finish coat.

Table 4.1.8 Water Absorption of Base Coat

Property	Unit	Requirement	Result	
Water absorption of base coat	Base coat (Parex 121 Dry Basecoat and Adhesive)	%	≤ 20 of the dry weight	15.0

Table 4.1.9 Water Absorption Coefficient of WRB at 72 Hours

Property	Unit	Requirement	Result
WeatherSeal Spray & Roll-on	kg/(m ² ·s ^{1/2})	≤ 4 × 10 ⁻³	0.5 × 10 ⁻³

Table 4.1.10 Impermeability to Water of Base Coat

Property	Unit	Requirement	Result
Parex 121 Dry Basecoat and Adhesive	h	No water penetration in less than 2 h	Pass

Table 4.1.11 Mildew and Fungus Resistance of Finish Coat

Property	Unit	Requirement	Result
Mildew and fungus resistance	No unit	No growth	Pass

Table 4.1.12 Accelerated Weathering Resistance of the Lamina and the WRB

Property	Unit	Requirement	Result
Lamina @ 2000 hrs	No unit	No cracking, flaking or deleterious effects	Pass
WRB @ 250 hrs			Pass

Table 4.1.13 Salt Spray Resistance of the Lamina

Property	Unit	Requirement	Result
Salt spray resistance @ 300 hrs	No unit	No cracking, flaking or deleterious effects	Pass

Table 4.1.14 Durability Under Environmental Cyclic Conditions

Property	Unit	Requirement	Result
Environmental cycling (60 cycles)	No unit	No cracking, blistering or sagging of base coat, and no detachment or crazing of finish coat	Pass
Adhesion bond strength	base coat (Parex 121 Dry Basecoat and Adhesive)	≥ 0.08	0.11
	finish coat (DPR Acrylic Finishes-534 Parex Sand Fine)		0.15

Table 4.1.15 Reinforcement Mesh Breaking Strength Resistance⁽¹⁾

Property	Unit	Requirement	Result	
Ash content	%	Report value	15.4	
Mass per unit area	g/m ²	Report value	145	
Tensile Strength and Elongation			Weft	Warp
Initial strength	N/mm	≥ 35	43.3	36.2
Loss of tensile strength after	28-day 3 ion soak	%	≤ 50	26.7 22.4
Residual tensile strength after	28-day 3 ion soak	N/mm	≥ 20	31.8 28.1
Elongation @ break	initial	%	Report value	4.1 4.1
	after 28-day 3 ion soak			2.9 2.9

Note to Table 4.1.15

- (1) The results for the reinforcement mesh breaking strength resistance test are based on the following mesh characteristics:
- Designation: Saint-Gobain 0038
 - Weight: 145.0 g/m²

Table 4.1.16 Impact Resistance of the EIFS

Property	Unit	Requirement	Result
Impact resistance of min. 153 g/m ² mesh	10 joules	Six of 10 free-fall drops shall show no perforation (broken mesh)	Pass
	3 joules	Six of 10 free-fall drops shall show no cracks	Pass

Table 4.1.17 Wind Load Resistance⁽¹⁾ of the EIFS

Reference Wind Pressure (kPa)	Sustained		Cycling		Gust		Deflection Test		
	P ₁ , P' ₁ (Pa)		P ₂ , P' ₂ (Pa)		P ₃ , P' ₃ (Pa)		Test Pressure (Pa) 2.18 P ₁ , P' ₁	Measured Maximum Net Mid-span Deflections (mm)	
								Stud Span 3050 mm	Sheathing Span 406 mm
Q₅₀ ≤ 0.45	±450	Pass	±660	Pass	±980	Pass	+980	8.9	1.1
							-980	-7.6	-1.0
Q₅₀ ≤ 0.55	±550	Pass	±800	Pass	±1 200	Pass	+1 200	11.0	1.3
							-1 200	-9.4	-1.2
Q₅₀ ≤ 0.65	±650	Pass	±950	Pass	±1 410	Pass	+1 410	12.9	1.5
							-1 410	-11.0	-1.4
Q₅₀ ≤ 0.75	±750	Pass	±1 090	Pass	±1 630	Pass	+1 630	14.9	1.7
							-1 630	-12.7	-1.6
Q₅₀ ≤ 0.85	±850	Pass	±1 240	Pass	±1 850	Pass	+1 850	16.9	2.0
							-1 850	-14.4	-1.8
Q₅₀ ≤ 1.00	±1 000	Pass	±1 460	Pass	±2 180	Pass	+2 180	19.9	2.3
							-2 180	-17.0	-2.1
Maximum test pressure @ L/180 deflection							+1 851	16.9	N/A
							-2 166		
Ultimate structural test pressure							+2 481	Pass	
							-2 481	Stud buckling occurred.	

Note to Table 4.1.17:

- (1) Specimen configuration for wind-load resistance test: 18 gauge steel stud framing (41 mm × 92 mm) at 406-mm-spacing; 13 mm thick glass-mat gypsum panel, sheathing fastened to framing with 32-mm self-drilling screws spaced at 203 mm in the field and along the edges; WeatherSeal Spray & Roll-on as WRB; Parex 121 Dry Basecoat and Adhesive as adhesive and basecoat 38-mm thick flat EPS insulation; and Parex 534 Sand Fine DPR Acrylic Finish.

Table 4.1.18 Drainage Capacity of “Parex Standard WaterMaster CI”

Property	Requirement	Panel	Result		
			Retained water after 1h period	Drainage capacity (%) after 1 h	Comments
			Per unit area (g/m ²)		
Drainage capacity	The unit-retained water (based on the projected drainage area) following a one-hour period shall not be greater than 40 g/m ² for any single test specimen. The drainage capacity shall not be less than 98% of the water mass delivered into the EIFS wall specimen.	Panel 1	29.2	99.5	Pass
		Panel 2	27.5	99.6	Pass
		Panel 3	31.7	99.5	Pass

4.2 Fire Performance

“Parex Standard WaterMaster CI” conforms to the requirements of Clause 3.1.5.5.(1)(b) of Division B of the NBC 2015. For a detailed description of compliance, please refer to Intertek fire listing SPEC ID: 44897 and Design No: Prx/WDEIFS 25-01 (please note that back-up wall assemblies covered by the design listing do not include wood framing and wood sheathings and extend to non-combustible substrates only (glass mat gypsum panel over steel stud, concrete and masonry)).

Report Holder

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