Priest & Associates Consulting, LLC

Issued Date: October 16, 2026
Expiration Date: October 16, 2029

Ross Power
PowerWool Insulation Inc.
107-3757 190 Street
Surrey, BC V3Z 0P6
Canada

Re: Engineering Evaluation Letter 11851 Revision 3
Evaluation of PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max as Substitutes for Noncombustible Mineral Wool Insulation in Fire-Resistance-Rated and NFPA 285-Compliant Wall Assemblies

Dear Mr. Power:

Priest & Associates Consulting, LLC (PAC) has reviewed the available certification documentation and supporting technical information for the PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max mineral wool insulation products.[1]

This evaluation documents the technical basis, assumptions, and conclusions for using these products as substitutes for noncombustible mineral wool insulation commonly used in fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.

BACKGROUND

PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max are mineral fiber board insulation products manufactured from stone wool fibers and intended for use within commercial and residential wall assemblies in applications appropriate to the respective product, including as cavity insulation, curtain wall insulation, spandrel insulation, and exterior continuous insulation.

The evaluated products are manufactured in densities ranging from approximately 3.5 pounds per cubic foot (pcf) to 11.0 pcf and are intended for applications commonly utilizing noncombustible mineral wool insulation products.

Table 1. Evaluated PowerWool Products

Product	Density	Typical Application
CurtainBoard	3.5 pcf	Exterior curtain wall insulation (Canada)
CurtainBoard 40	4.0 pcf	Curtain wall insulation, spandrel insulation, cavity wall insulation
CurtainBoard 80	8.0 pcf	Exterior curtain wall insulation
CavityBoard	4.5 pcf	Exterior continuous insulation, cavity wall insulation, and rainscreen wall assemblies
CavityBoard HD	6.0 pcf	Exterior continuous insulation, cavity wall insulation, and rainscreen wall assemblies
RigiBoard 80	8.0 pcf	Exterior continuous insulation and wall assemblies

[1] QAI Listing B1124-1, PowerWool Mineral Fiber Board Insulation Products.

Product	Density	Typical Application
RigiBoard Pro Max	11.0 pcf	High-density continuous insulation and heavy-duty cladding applications

PAC also reviewed comparable certification documentation for mineral wool insulation products commonly utilized within approved fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.[2]

This evaluation compares certified material classifications, intended applications, density ranges, noncombustibility characteristics, and fire performance attributes documented in the reviewed certifications, along with an engineering assessment of the function and performance of mineral wool insulation within fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.

PAC reviewed QAI certification documentation for mineral wool insulation products incorporated within fire-resistance-rated wall assemblies. The reviewed certifications include wall assemblies evaluated for fire resistance in which mineral wool insulation is incorporated as part of the assembly construction. PAC compared the evaluated PowerWool products against these certified mineral wool products based on material classification, density, intended application, and fire performance characteristics.

SUMMARY OF ENGINEERING OPINION

PAC reviewed certification documentation for noncombustible mineral wool insulation products incorporated within approved fire-resistance-rated wall assemblies, including representative one-hour and two-hour wall assemblies evaluated in accordance with ASTM E119, as well as noncombustible mineral wool insulation products commonly utilized within NFPA 285-compliant exterior wall assemblies.

Based upon the reviewed certification documentation and engineering analysis, it is our opinion that PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max may be substituted for comparable noncombustible mineral wool insulation products within approved fire-resistance-rated wall assemblies and approved NFPA 285-compliant exterior wall assemblies when equivalent or greater density and thickness are maintained, and all other assembly requirements remain unchanged.

This opinion includes applications where mineral wool insulation is utilized as cavity insulation, exterior continuous insulation, curtain wall insulation, spandrel insulation, and similar applications where mineral wool insulation performs a comparable function within the assembly, subject to the certified classification, intended application, and limitations applicable to the specific PowerWool product being substituted.

Accordingly, substitution of the evaluated PowerWool products would not be expected to adversely affect the fire-resistance performance of approved fire-resistance-rated wall assemblies, including representative one-hour and two-hour wall assemblies reviewed as part of this evaluation, or the NFPA 285 performance of approved exterior wall assemblies used in Types I, II, III, and IV construction.

Table 2. Summary of Engineering Opinion

Evaluation Conclusion	Result
Fire-Resistance-Rated Wall Assemblies	PowerWool products may be substituted*
Representative One-Hour ASTM E119 Wall Assemblies Reviewed	Applicable*
Representative Two-Hour ASTM E119 Wall Assemblies Reviewed	Applicable*
NFPA 285-Compliant Exterior Wall Assemblies	PowerWool products may be substituted*

[2] QAI Listing B1067, ROCKWOOL Mineral Wool Insulation Products.

Evaluation Conclusion	Result
Types I, II, III, and IV Construction	Applicable*

* Provided the substituted PowerWool product possesses equivalent or greater density and thickness, is used within its intended application, and all other assembly requirements remain unchanged.

RESEARCH AND ANALYSIS

Noncombustibility Characteristics

The reviewed certification documentation identifies the evaluated PowerWool products as mineral fiber board insulation products complying with recognized industry standards applicable to mineral wool insulation. The certifications indicate compliance with standards commonly utilized to establish noncombustibility, mineral fiber board insulation classifications, and surface burning characteristics for mineral wool insulation products.

The International Building Code (IBC) recognizes materials that comply with ASTM E136 as noncombustible. The reviewed certification documentation indicates that the evaluated PowerWool products comply with ASTM E136 and are therefore considered noncombustible materials for use where noncombustible materials are required.

Mineral wool insulation is widely used in the construction industry for its noncombustible nature and resistance to ignition and flame propagation. These characteristics have led to widespread use in fire-resistance-rated wall assemblies, NFPA 285-compliant exterior wall assemblies, perimeter fire containment systems, curtain wall systems, and other applications requiring noncombustible construction.

The reviewed certification documentation further indicates that the evaluated products exhibit surface-burning characteristics consistent with those commonly associated with noncombustible mineral wool insulation products. These characteristics support their use in applications where noncombustible thermal insulation materials are commonly specified.

Mineral Wool Equivalency

The evaluated PowerWool products have material classifications, densities ranging from approximately 3.5 pcf to 11.0 pcf, intended applications, and noncombustibility characteristics comparable to those of mineral wool insulation products commonly used throughout the building industry.

The reviewed certification documentation identifies the evaluated products as noncombustible mineral fiber board insulation intended for use as cavity, curtain wall, spandrel, and exterior continuous insulation as applicable to the specific product. The products are manufactured at densities commonly associated with mineral wool insulation products used in fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.

Because the evaluated products are noncombustible mineral wool insulation with comparable physical characteristics and intended uses, substitution with other noncombustible mineral wool insulation products is not expected to adversely affect the fire performance of approved wall assemblies when equivalent or greater density and thickness are maintained.

Fire-Resistance-Rated Wall Assemblies

Mineral wool insulation incorporated within fire-resistance-rated wall assemblies serves a variety of functions depending upon the assembly configuration. While the insulation may influence the assembly's thermal characteristics, the fire-resistance rating is primarily governed by the interaction among the gypsum membrane protection, framing configuration, structural sheathing, attachment methods, assembly geometry, and continuity of construction.

The reviewed certification documentation demonstrates that mineral wool insulation products are incorporated within approved fire-resistance-rated wall assemblies. Including mineral wool insulation in these assemblies is consistent with the material's noncombustible nature and its widespread use in fire-resistance-rated construction.

Many listed fire-resistance-rated wall assemblies incorporate mineral wool insulation as cavity insulation and identify minimum insulation thickness, density, or material classification requirements without limiting the insulation to a specific manufacturer. Accordingly, the fire-resistance performance of such assemblies generally depends on using noncombustible mineral wool insulation with the required physical characteristics, installed in accordance with the assembly requirements, rather than on a particular manufacturer's product.

In certain fire-resistance-rated wall assemblies, mineral wool insulation may play a more significant role in the assembly's overall fire performance, including applications where exterior continuous insulation is installed over combustible sheathing or other combustible components. In such assemblies, mineral wool insulation may help limit heat transfer and protect combustible materials during a fire. The evaluated PowerWool products exhibit noncombustibility, density ranges, thermal resistance, intended applications, and installation configurations comparable to those of mineral wool insulation products commonly used in such assemblies. Accordingly, where mineral wool insulation contributes to protecting combustible sheathing or other combustible components within a fire-resistance-rated assembly, replacing it with an evaluated PowerWool product of equivalent or greater thickness and density would not diminish that protective function or adversely affect the assembly's fire-resistance performance.

Therefore, replacing the specified noncombustible mineral wool insulation with an evaluated PowerWool product with equivalent or greater thickness and density, installed for the same intended application, would not be expected to adversely affect the fire-resistance performance of the wall assembly, provided all other assembly components and installation details remain unchanged.

NFPA 285-Compliant Exterior Wall Assemblies

Mineral wool insulation is commonly used in approved NFPA 285 wall assemblies because it is noncombustible and does not contribute fuel to fire propagation within the assembly. The evaluated PowerWool products are likewise noncombustible mineral wool insulation products intended for comparable applications. Therefore, substitution of the evaluated products for noncombustible mineral wool insulation products within approved NFPA 285 wall assemblies is not expected to increase flame spread, heat release, or fire propagation when the substituted PowerWool product is used within its intended application, possesses an equivalent or greater density, and is installed at an equivalent or greater thickness, provided all other assembly components remain unchanged.

Noncombustible mineral wool insulation is commonly incorporated into approved exterior wall assemblies used in Types I, II, III, and IV construction. The evaluated PowerWool products possess the same fundamental noncombustible characteristics and serve the same functional role as mineral wool insulation products commonly used in such assemblies. Therefore, substituting the evaluated products would not be expected to adversely affect the NFPA 285 performance of approved wall assemblies when the substituted PowerWool product is used within its intended application, has an equivalent or greater density, and is installed at an equivalent or greater thickness, provided all other assembly components remain unchanged.

Engineering Basis for Product Substitution

Noncombustible mineral wool insulation products from various manufacturers are commonly used interchangeably in the construction industry, provided they maintain equivalent density, thickness, and intended application. The fire performance of these products is primarily governed by their mineral wool composition, noncombustible nature, density, and installation within the assembly.

The substitution of one noncombustible mineral wool insulation product for another is generally evaluated based upon equivalency of material composition, noncombustibility characteristics, density, thickness, intended application, and fire performance attributes. The evaluated PowerWool products have characteristics comparable to mineral wool insulation products commonly incorporated within approved fire-resistance-rated and NFPA 285-compliant wall assemblies and are intended to perform the same functional role within such assemblies.

The reviewed certifications demonstrate that mineral wool insulation products, with varying densities and manufactured by different producers, are used in similar wall assembly applications where noncombustibility, thermal stability, and fire performance are the governing properties. The evaluated PowerWool products possess these same fundamental characteristics and, therefore, are not expected to perform differently than comparable mineral wool insulation products when utilized in the same application.

CONCLUSION

Based upon the reviewed certification documentation and engineering analysis, it is our opinion that PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max possess physical properties, intended applications, and fire performance characteristics comparable to those of noncombustible mineral wool insulation products commonly utilized within fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.

The reviewed certification documentation further demonstrates that mineral wool insulation products are incorporated within approved fire-resistance-rated wall assemblies. Based upon the equivalency of the evaluated PowerWool products to other certified mineral wool insulation products and the engineering analysis presented herein, substitution of PowerWool CurtainBoard, CurtainBoard 40, CurtainBoard 80, CavityBoard, CavityBoard HD, RigiBoard 80, and RigiBoard Pro Max for comparable noncombustible mineral wool insulation products would not be expected to adversely affect the fire-resistance performance of wall assemblies utilizing noncombustible mineral wool insulation when equivalent or greater density and thickness are maintained, the substituted product is used within its intended application, and all other assembly components and installation details remain unchanged.

It is our further opinion that the evaluated PowerWool products may be used in place of comparable noncombustible mineral wool insulation products within approved NFPA 285-compliant exterior wall assemblies used in Types I, II, III, and IV construction. Based on their noncombustible nature and comparable fire performance characteristics, such substitutions are not expected to increase vertical or lateral flame propagation within otherwise approved wall assemblies.

LIMITATIONS

This evaluation is based on specific certification documentation and supporting information reviewed for the PowerWool products evaluated.

- This evaluation is limited to fire performance considerations associated with the substitution of the evaluated products for comparable noncombustible mineral wool insulation products within fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies.
- The substituted PowerWool product shall be installed at a thickness equal to or greater than the mineral wool insulation specified within the approved assembly and shall possess a density equal to or greater than that of the insulation being replaced.
- Each evaluated PowerWool product shall be used only within applications consistent with its certified classification and manufacturer-identified intended use. PowerWool CurtainBoard is limited to exterior applications in Canada as identified in the reviewed product documentation.
- All other assembly components, materials, dimensions, attachment methods, fastening schedules, and installation details shall remain consistent with those of the approved assembly.

- This evaluation applies only to the products identified herein and shall not be interpreted as approval for substitution of combustible insulation products or products having substantially different physical or fire performance characteristics.
- This evaluation does not constitute certification, listing, or approval by any regulatory or accreditation body.
- Final determination of code compliance and acceptance for use remains the responsibility of the authority having jurisdiction.

The conclusions presented herein are based on sound engineering judgment and the information reviewed. All technical reasoning supporting these conclusions is contained within this evaluation.

If you have any comments or questions, please let us know at your earliest convenience.

Submitted by,

Mike Luna
President – Principal/Partner
(830) 581-1455

October 16, 2026

Reviewed and approved,

Deg Priest
CEO – Principal/Partner

October 16, 2026

APPENDIX A
Representative Application Examples

The following figures are provided solely as representative examples of common wall assembly applications for the evaluated PowerWool products. These figures are included for illustrative purposes only and are not intended to define, limit, or represent all wall assemblies within the scope of this evaluation.

The engineering opinions presented in this evaluation apply to substituting the evaluated PowerWool products for comparable noncombustible mineral wool insulation products in approved fire-resistance-rated wall assemblies and NFPA 285-compliant exterior wall assemblies, subject to the limitations contained herein. The figures shown in this appendix are not intended to represent evaluated assembly configurations, certified and listed assemblies, or approved wall designs unless separately documented by the applicable listing, test report, or engineering evaluation.

These are representative application examples only. Actual wall assembly configurations may vary.

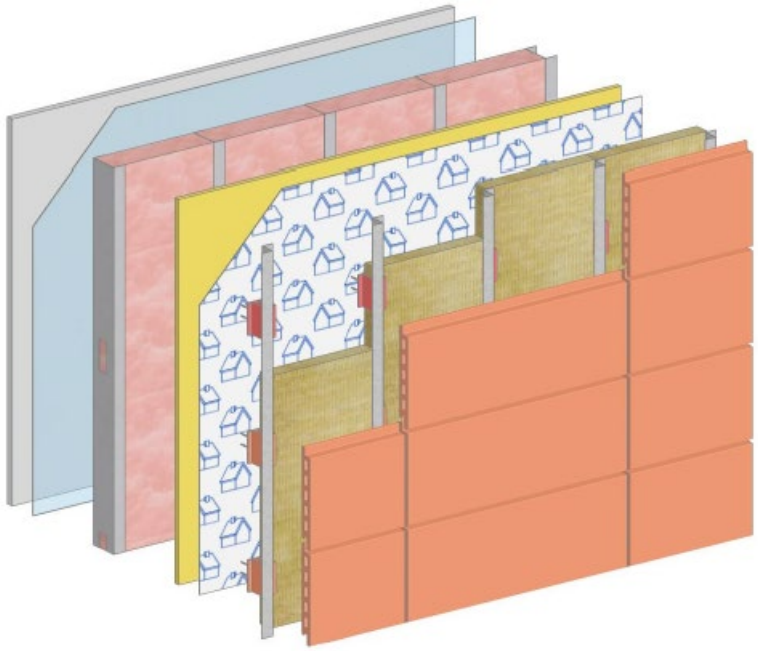

Figure A-1. Representative Exterior Wall Assembly Utilizing PowerWool CavityBoard Insulation

Figure A-2. Representative Exterior Wall Assembly Utilizing PowerWool RigiBoard Continuous Insulation