ICC-ES Evaluation Report

ESR-5374

Issued January 2025

Subject to renewal January 2026

This report also contains:

- CA Supplement
- FL Supplement

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 21 00—Thermal Insulation Section: 07 26 00—Vapor Retarders Section: 07 27 00—Air Barriers	REPORT HOLDER: ROXUL INC. dba ROCKWOOL	EVALUATION SUBJECT: ROCKWOOL SMARTROCK®	

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2024, 2021, 2018, 2015 and 2012 *International Building Code®* (IBC)
- 2024, 2021, 2018, 2015 and 2012 *International Residential Code® (IRC)*
- 2024, 2021, 2018, 2015 and 2012 *International Energy Conservation Code®* (IECC)

Main references of this report are for 2024 IBC, IRC and IECC. See Table 2 for applicable sections of the code for previous IBC, IRC and IECC editions.

Properties evaluated:

- Thermal Resistance
- Vapor Permeance
- Surface-burning Characteristics
- Noncombustibility
- Humidity-dependent Vapor Retarder Properties
- Air Leakage
- Physical Properties

2.0 USES

ROCKWOOL Smartrock® boards are used in buildings of all construction types (Types I, II, III, IV, and V) under the IBC, and all buildings covered by the IRC.

Smartrock® boards are designed to meet both thermal and vapor retarder requirements specified by the code. They are installed on the interior side of exterior mass wall assemblies to meet the vapor retarder requirements of IBC Section 1404.3 and IRC Section R702.7.

The boards may also be used as a component of an air barrier assembly under IECC Section C402.6.2.3.2.

3.0 DESCRIPTION

3.1 General:

ROCKWOOL Smartrock® boards described in this report are comprised of a humidity-dependent vapor retarder ProClima INTELLO PLUS® membrane laminated on the surface of a mineral wool insulation board. The membrane is a polypropylene nonwoven fabric with a vapor-variable polyethylene copolymer membrane and a polypropylene microfiber fleece cover, compliant with ICC-ES Acceptance Criteria for Humdity-Dependent Vapor Retarders (AC528). This membrane layer is laminated to stone wool insulation boards, compliant with ASTM C612. ROCKWOOL Smartrock® boards are available in thicknesses ranging from 2 to 5 inches (51 to 127 mm), with dimensions of 24 inches (610 mm) in width and 48 inches (1219 mm) in length. The nominal board density is 4.3 pounds per cubic foot (69 kg/m^3).

4.0 PROPERTIES

4.1 Surface-burning Characteristics:

Smartrock® boards have a flame spread index of less than 25 and a smoke-developed index of less than 50, when tested in accordance of ASTM E84.

4.2 Noncombustibility:

Smartrock® boards are classified as a noncombustible material in accordance with the Exception to IBC Section 703.3.1.

4.3 Thermal Resistance:

Smartrock® boards have a thermal resistance, *R*-value, of 4.3 per inch at a mean temperature of 75°F (24°C) when tested in accordance with ASTM C518.

4.4 Vapor Permeance:

Smartrock® boards include a humidity-dependant vapor retarder INTELLO PLUS® and must comply with Section 5.2 of this report.

4.5 Air Leakage:

The membrane has an an air leakage rate not exceeding 0.2 L/s-m^2 [0.04 cfm/ft^2 at 75 Pa (1.57 psf)], when used as a component of an air barrier assembly as described in Section 5.3, when tested in accordance with ASTM E2357.

5.0 INSTALLATION

5.1 General:

The manufacturer's published installation instructions and this report must be strictly adhered to. If requested by the code official, a copy of this report must be available at the jobsite during installation.

The use and installation of tape to seal seams and edges of the membranes must be in accordance with the manufacturer's installation instructions.

5.2 Humidity-Dependent Vapor Retarder:

The equivalent air layer thickness values shown in Table 1 of this report are based on testing in accordance with ISO 12572 and must be used to conduct a hygrothermal analysis as an alternate to the vapor retarder provisions in IBC Section 1404.3 and IRC Section R702.7. The hygrothermal analysis must be prepared by a registered design professional and is subject to approval by the code official.

5.3 Air Barrier Assembly:

When installed on the interior side of external mass wall assemblies, the boards may be used as a component of an air barrier assembly. The membrane seams and penetrations must be sealed with tape in accordance with the manufacturer's installation instructions.

6.0 CONDITIONS OF USE:

ROCKWOOL Smartrock® boards described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

6.1 The boards must be installed in accordance with the manufacturer's published installation instructions, the requirements of the applicable code and this report. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

6.2 The boards must be installed on the interior side of external wall assemblies.

6.3 When used as a component of an air barrier assembly, the design and evaluation of the air barrier assembly must be submitted to and approved by the code official.

6.4 The boards are produced under a quality control program with inspections by ICC-ES.

7.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Factory Bonded Humidity-Dependent Vapor Retarder Membranes to Rigid Insulation Board (AC566) dated November 2024.

8.0 IDENTIFICATION

8.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5374) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

8.2 In addition, each package of ROCKWOOL Smartrock® boards covered by this report must be labeled with the manufacturing address and date of manufacture.

8.3 The report holder's contact information is the following:

ROXUL INC. dba ROCKWOOL
8024 ESQUESING LINE
MILTON, ONTARIO L9T 6W3
CANADA
(800) 265-6878
www.rockwool.com

TABLE 1—Water Vapor Diffusion-Equivalent Air Layer Thickness, S_d (m) in accordance with ISO 12572

Climatic Conditions (Temperature, Dry Point/Wet Point)	Average Humidity	ROCKWOOL Smartrock Vapor-Variable Membrane Sd (m)	ROCKWOOL Smartrock Vapor-Variable Membrane Permeance (US Perm)
23°C, 0/50% RH	25% relative humidity	38.3	0.09
23°C, 50/93% RH	71.5% relative humidity	2.93	1.19
23°C, 85/95% RH	90% relative humidity	0.58	6.03

For Imperial Units: T(°F) = T(°C) X 1.8 + 32.

[1] The tabulated water-vapor diffusion-equivalent air layer thickness applies only to the ROCKWOOL Smartrock humidity-dependent membrane. The water-vapor diffusion-equivalent air layer thickness of the ROCKWOOL Smartrock base mineral wool (stone wool) insulation must be determined by a registered design professional when conducting a hygrothermal analysis.

TABLE 2- APPLICABLE SECTIONS OF THE IBC, IRC and IECC UNDER EDITIONS OF THE CODES

IBC				
2024 IBC	2021 IBC	2018 IBC	2015 IBC	2012 IBC
Section 703.3.1		Section 703.5.2		
Section 1404.3			Section 1405.3	
IRC				
2024 IRC	2021 IRC	2018 IRC	2015 IRC	2012 IRC
Section R702.7				
IECC				
2024 IECC	2021 IECC	2018 IECC	2015 IECC	2012 IECC
Section C402.6.2.3.2	Section C402.5.1.4	Section C402.5.1.2.2		Section C402.4.1.2.2

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 21 00—Thermal Insulation
Section: 07 26 00—Vapor Retarders
Section: 07 27 00—Air Barriers

REPORT HOLDER:

ROXUL INC. dba ROCKWOOL

EVALUATION SUBJECT:

ROCKWOOL SMARTROCK®

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that ROCKWOOL Smartrock® boards, described in ICC-ES evaluation report ESR-5374, have also been evaluated for compliance with the codes noted below.

Applicable code edition*(s)*:

- *2022 California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- *2022 California Residential Code* (CRC)
- *2022 California Energy Code (CEC)*

2.0 CONCLUSIONS

2.1 CBC:

The ROCKWOOL Smartrock® boards, described in Sections 2.0 through 8.0 of the evaluation report ESR-5374, comply with CBC Chapters 7 and 14, provided the design and installation are in accordance with the 2021 *International Building Code®* (IBC) provisions noted in the evaluation report and the additional requirements of CBC, as applicable. Use as an air barrier and thermal insulation must be in accordance with CEC.

2.1.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The ROCKWOOL Smartrock® boards, described in Sections 2.0 through 8.0 of the evaluation report ESR-5374, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2021 *International Residential Code®* (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 4. Use as an air barrier and thermal insulation must be in accordance with CEC.

2.3 CEC:

The ROCKWOOL Smartrock® boards, described in Sections 2.0 through 8.0 of the evaluation report ESR-5374, comply with CEC, provided the design and installation are in accordance with the 2021 *International Building Code®* (IBC) and *International Residential Code®* (IRC) provisions noted in the evaluation report.

2.3.1 In accordance with Section 110.8 of the 2022 California Energy Code, verification of certification by the department of Consumer Affairs, Bureau of Household Goods and Services, must be provided to the code official, demonstrating that the insulation conductive thermal performance is approved pursuant to the California Code of Regulations, Title 24, Part 12, Chapter 12-13, Article 3, “Standards for Insulating Material.” Certification can be verified with the DCA Bureau of Household Goods and Services using the following link to the bureau’s Directory of Certified Insulation Materials: bhgs.dca.ca.gov/consumers/ti_directory.pdf

This supplement expires concurrently with the evaluation report, issued January 2025.

ICC-ES Evaluation Report

ESR-5374 FL Supplement

Issued January 2025

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Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The ROCKWOOL Smartrock® boards, described in Sections 2.0 through 8.0 of ICC-ES evaluation report ESR-5374, comply with the *Florida Building Code-Building* and the *Florida Building Code-Residential*. The design requirements must be determined in accordance with the *Florida Building Code-Building* or the *Florida Building Code-Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-5374 for the 2021 *International Building Code®* meet the requirements of the *Florida Building Code-Building* or the *Florida Building Code-Residential,* as applicable.

Use of the ROCKWOOL Smartrock® boards for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code-Building* or the *Florida Building Code-Residential* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report issued January 2025.