SPECIFICATION DATA SHEET

GRAYWALL VAPOUR PERMEABLE AIR BARRIER

1. PRODUCT NAME
Air Barrier:
Graywall

2. MANUFACTURER
Advanced Coatings Inc.
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3. PRODUCT DESCRIPTION
Basic Use: Primarily intended as a non-accessible air barrier for all types of cavity wall construction. Graywall provides an air barrier on exterior construction surfaces such as masonry, concrete and drywall systems utilizing an interior vapour barrier such as polyethylene film where the entrapment of water vapour is to be avoided. Can be installed on the cold side of the wall assembly without trapping moisture.

New construction or retrofit.

For commercial, industrial and institutional applications.

Composition and Materials:
Graywall is a 100% rubber copolymer liquid applied air barrier membrane that is designed to resist air leakage when applied to construction surfaces while remaining permeable to the passage of water vapour. Graywall is spray applied to the substrate by manufacturer approved applicators.

Transition joints in the substrate to receive Graywall are first sealed with Rub-R-Wall SA, a self-adhering, cold-applied composite sheet membrane (transition strip). These strips, approximately 150 mm (6") wide, are located at beams, columns, changes in substrate material, and similar joints or connections to provide continuity of the air barrier assembly.

Graywall meets all of the principal requirements and design criteria for a properly constructed air barrier for the building envelope, namely:

- resistance to air flow
- structural soundness, capable of resisting wind and other loads, over its expected life span
- continuity throughout the building envelope
- be permanent if concealed

Wet Thickness: 1.0 mm (40 mils)

Application Rate: 3.2 to 3.6 m^2/4.5L (35 to 40 sq. ft./gal.) depending on substrate conditions.

Colour: Gray

Limitations: Not designed to perform as a permanently exposed membrane.

4. TECHNICAL DATA
Applicable Standards: Meets and exceeds National Research Council (NCR) Type III Air Leakage Requirements. See Physical Properties Chart.

Environmental Considerations:
Graywall membrane is non-toxic, non-carcinogenic and will not contaminate ground water.

5. INSTALLATION
Preparatory Work: Refer to Examination section of specifications for substrate requirements by others (new construction).

Under the work of the air barrier section of work, the following preparatory requirements include:

1) Removing loose or foreign matter which might impair adhesion of materials.
2) Filling any voids on masonry or concrete with a propriety mastic substrate filler (Graywall Mastic).
3) Joints between panels of exterior grade gypsum or plywood up to 1.5 mm (1/16") should be reinforced with a strip of 50 mm (2" wide) glass fibre tape prior to application of Graywall. Joints between panels of exterior grade gypsum or plywood that measure greater than 1.5 mm (1/16") to 3 mm (1/8") should be sealed with Rub-R-Wall SA "transition strip" adhered to the substrate. Joints larger than 3 mm (1/8") should be sealed with drywall mud or similar material prior to application of Graywall.
4) Cleaning and priming substrate joint/ connection surfaces and applying Rub-R-Wall SA "transition strip".

Methods: *Graywall is applied using manufacturer approved applicators who undergo extensive training and are monitored for quality performance.*

Applied over outer surface of inner wythe of masonry, concrete, drywall or plywood, Graywall is sprayed on to surfaces using alternating horizontal and vertical passes to ensure complete coverage of substrate and transition strip material. Masonry anchors or other penetrations are sealed air tight.

Transition joints are sealed using Rub-R-Wall SA "transition strip" over firm bearing at beams, columns, changes in substrate material and similar joints or connections including at window frame perimeter and door frames. Generally strips are applied so that a minimum of 75 mm (3") coverage is achieved over both substrates, and with 25 mm (1") of full contact over window or door frames.
Graywall is applied within the recommended application temperature range (may be applied successfully at temperatures as low as -15^{0}C [5^{0}F]).

Airless spray equipment having a minimum pressure of 20 684 kPa (3000 psi) is used to apply Graywall.

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Specification assistance.
Site advice and recommendations.

Typical Physical Properties* (Imperial Measure. Metric chart available upon request).

PROPERTY	TEST METHOD	TEST RESULTS
Air Leakage Rate	ASTM E283	0.00220 L/s.m^2 (considerably lower than the 0.05 L/s.m^2 value for a type III air barrier as proposed by NRC (National Research Council.)
Elongation (%)	ASTM D412 (die C)	1400%
Low-Temperature Flexibility	Bend around 0.5 inch mandrel	Flexible to -20° F (-29° C)
Colour		Gray
Asphalt Content	GPC	0.0%
180° Peel Adhesion	Metal Plate	18 lbs./inch
Solids by Volume		60%
Water Vapour Permeance	ASTM E96 (water method)	125 ng/Pa.s.m^2 (2 perms)
Liquid Water Absorption	ASTM D95	Less than 0.5% (weight)
Resistance to Bacteria	ASTM D4299-83 (modified)	No attack
Resistance to Gust Wind Load	ASTM E330	Resists a suction pressure of 3,000 Pa (62.8 lbs./ft^2) maintained for 10 seconds with no delamination and no increase in air leakage rate when tested at 75 Pa (1.6 lbs./ft^2)
Resistance to Sustained Wind Load	ASTM E283	Resists a suction pressure of 1,000 Pa (20.9 lbs./ft^2) maintained for 1 hour with no delamination and no increase in air leakage rate when tested at 75 Pa (1.6 lbs./ft^2)

5. INSTALLATION (continued)
The coverage rate of the completed membrane application is 3.2 to 3.6 m^2/ 4.5 L (35 to 40 sq. ft./gal.) which provides a wet thickness of 1.0 mm (40 mil). Drying time for Graywall is approximately 90 minutes, given average conditions and standard thickness.

A spray or board type cavity wall insulation is then adhered to the Graywall to prevent convection currents occurring behind the insulation. Wedges or clips are normally used to secure the insulation.

Building Codes: Graywall meets the intent of Part 5 (Section 5.3 Control of Air Leakage, Subsection 5.3.1 Air Barriers) of the National Building Code (NBC).

6. AVAILABILITY AND COST
Availability: Graywall is available across Canada and throughout the U.S., usually shipped from stock. Contact Advanced Coatings Inc. for list of Dealers/ Applicators.

Cost: Current price list available from Dealers/ Applicators along with standard conditions of sale.

7. WARRANTY
The information herein is the best available relating to Graywall, and the recommendations contained herein are based on tests believed to be reliable. We warrant our products to be of merchantable quality and suitable for the purpose for which it is intended. We do not make any other warranty, express or implied, statutory or otherwise.

8. MAINTENANCE
Graywall membrane does not require any maintenance. Damaged areas are easily repaired by spraying over affected areas. Cold joints or recoating is not a problem; newly applied material easily blends with existing Graywall material to provide a monolothic membrane.

9. TECHNICAL SERVICES
For technical support call Advanced Coatings Inc. toll free.

10. RELATED REFERENCES
Construction Specifications Canada (CSC) Tek-Aid 07195 Air Barriers (Digest and Master Specification).

National Master Specification (NMS) Section 07196 Air Barriers (Descriptive / Proprietary).

"An Air Barrier for the Building Envelope, National Research Council Canada, Proceedings Building Science Insight "86"