

Ribbit Resource: Reverse Vapor Drive

August 2017

What Is 'Reverse Vapor Drive' ?

Image shows poorly ventilated wall with condensation.

Reverse vapor drive' or 'inward solar vapor drive' is used to describe the inward vapor movement due to solar heating of an absorptive cladding such as brick veneer, stucco, and manufactured stone.

In the 1990's air-conditioned homes with poorly ventilated brick veneer were showing signs of condensation on the interior vapor barriers during the summer months. In the investigations that followed it was clear that the summer time condensation was in part due to reverse vapor drive.



Image shows poorly ventilated wall with condensation.

Mitigating Vapor Pressure 'Push'

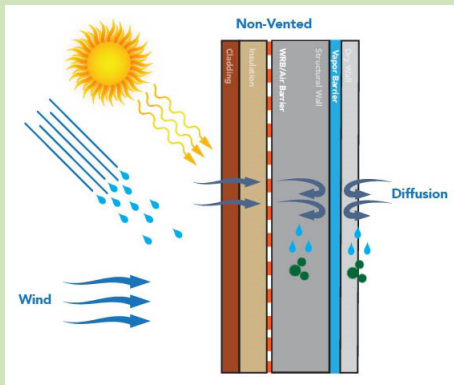
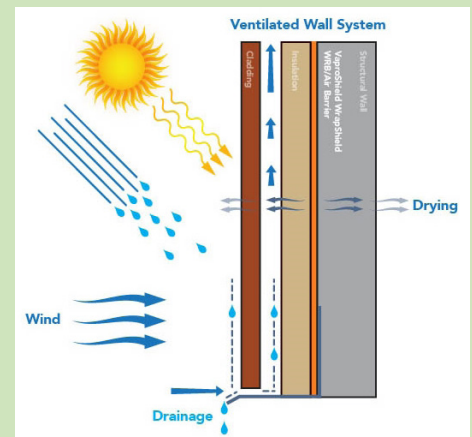


Figure 1 shows the common yet problematic solution to prevent reverse vapor drive is the installation of an exterior vapor barrier.

Unfortunately, this seals out vapor, but seals in any trapped moisture.

< Figure 1. Rendering of Vapor Pressure Push (2017)

> Figure 2. Rendering of Ventilated Wall System (2017.)



Preventing Reverse Vapor Drive with Rain Screen Design

A ventilated wall system-sometimes referred as a rain screen-provides a drainage and venting cavity for the wall system (Figure 2.)

VaproShield's Installation Best Practices requires a rain screen or ventilated cladding design that 'vents off' the resulting vapor pressure when present. This practice prevents reverse vapor drive and allows effective drying in both directions of the wall system.

Review the complete Ribbit Resource on Reverse Vapor Drive on our website.

RIBBIT TIDBITS

NFPA 285 Compliant Assemblies

View multiple NFPA 285 compliant assemblies with various substrate/insulation/cladding manufacturers



VaproShield Details Library

View over 100 Details for: varied window types, rough openings, penetrations, multiple insulations, diverse cladding and attachment systems



PROJECT HIGHLIGHT

Washington Place / Tukwila, WA

Over 120,000 sq. ft. of WrapShield SA Self-Adhered (orange) and 110,000 sq. ft. of RevealShield SA Self-Adhered (black.)

- The tenacious and innovative Self-Adhered VaproShield adhesive eliminated the possibility of wind tear or damage.
- UV-stable black RevealShield SA Self-Adhered was perfect for the open joint rainscreen cladding.
- **The combination of extremely airtight VaproShield membranes and accessories enabled the architect to remove a layer of exterior sheathing; saving thousands in labor and material costs.**



VAPROSHIELD ON THE MOVE



Living Product Expo 2017

The Living Product Expo, Sept 12-14 in Pittsburgh, is the place to be to get the tools and find the team you need to get buy-in on your next big idea.



Greenbuild and ABX 2017

8 - 10 November 2017

Boston Convention & Exhibition Center



RCI Building Envelope Technology Symposium

Technical Education for Building Envelope Professionals.
November 13-14, 2017 in
Orlando, Florida's Omni
Orlando Resort.



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