Air & Vapor Barrier Systems

TREMCO®
Commercial Sealants & Waterproofing

ExoAir® Air & Vapor Barrier Systems: A Completely Compatible, Continuous, Comprehensive System

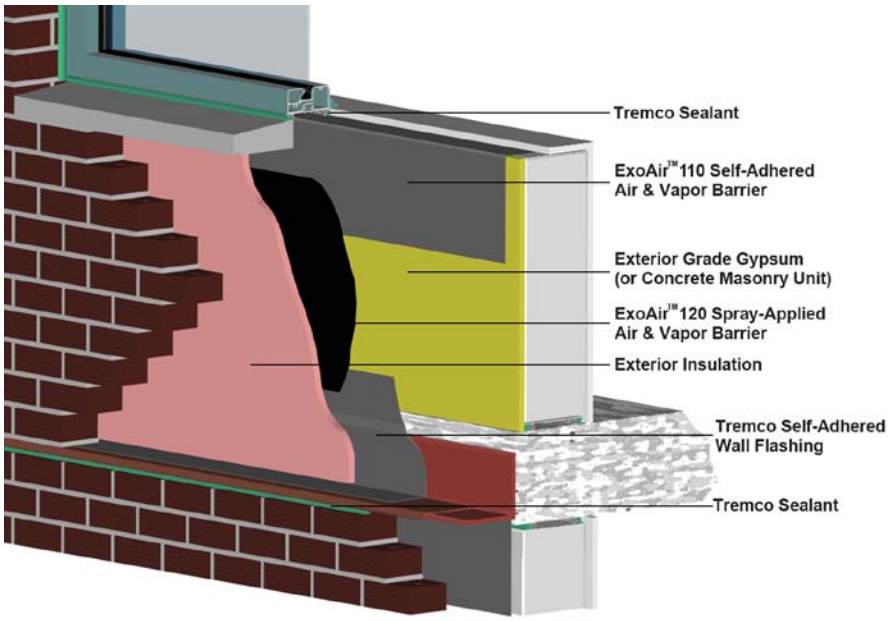
Air and vapor barriers are designed to block moisture vapor as well as air. While air barriers are intended to prevent air leakage through a wall, they must also minimize the chances for condensation to occur in the wall cavity.

Moisture vapor will naturally diffuse into and through wall assemblies. The movement of moisture by diffusion occurs due to differences in vapor pressure resulting from temperature and moisture content in the air. If there is a temperature difference of 20 degrees between the indoors and the outdoors, the vapor drive becomes quite strong and becomes even stronger if there is a significant difference in humidity.

The warmer the air is, the more moisture it can hold in the form of vapor. As it cools, it will reach a point where it can no longer hold water, or its dew point. This results in condensation on the surface bordering the temperature gradients. If the moisture that condenses inside the wall cavity is significant and the wall is not protected, mold and mildew can grow and damage or deterioration begins.

If climates remained the same for most of the year, the selection of the air barrier system and where it is located in relation to the insulation in the wall would not be difficult. In areas such as Miami, Florida where the climate is hot and humid and generally stays that way throughout the year, an air and vapor barrier should prevent moisture vapor from entering the wall cavity from the outside and creating condensation year-round.

In some climates, however, seasonal differences can be significant causing vapor drive to go in both directions. Using project information provided by design professionals and WUFI, a PC-based modeling program developed in Germany by the Fraunhofer Institute for Building Physics, Tremco's Technical Services Team can calculate and illustrate potential wall performance over time based upon how vapor drive and moisture diffusion occur within the design under any climatic conditions in any region of the country.



Drying of the wall cavity should be promoted in one or both directions. Air and vapor barriers prevent both air infiltration and vapor diffusion and must be positioned on the warm side of the insulation since air moves from the warm side to the cold side.

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Membrane:

ExoAir 120 Fluid-Applied Air & Vapor Barrier Membrane serves as the foundation for the system, providing:

- **The option to roll or spray**, affording increased flexibility during installation to accommodate the unique circumstances of every project.
- An **environmentally responsible, water-based formulation** that can be applied to damp or dry surfaces without the need for a primer.
- A **monolithic, seamless membrane** which ensures continuous integrity without gaps.
- A **fully adhered membrane** capable of resisting wind cycling.
- **Co-spray** to allow membranes to set up quicker to meet fast-track construction schedules or when weather threatens washout.

Detailing and Connections:

ExoAir 110 Self-Adhered Air & Vapor Membrane may be used as a transition membrane into door and window openings.

ExoAir TWF (Thru-Wall Flashing) Membrane is a 40-mil composite sheet used as a wall flashing or to seal around penetrations. It consists of a SBS-rubberized asphalt sheet with a HDPE backing and siliconized release liner.

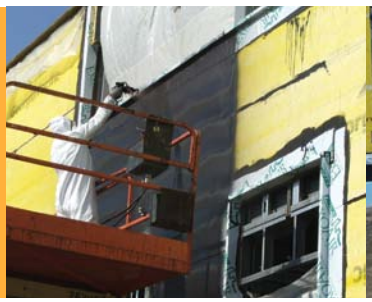
ExoAir Primer is formulated for use with ExoAir 110 and ExoAir TWF.

ExoAir Termination Mastic is a mastic used to seal joints in the ExoAir Air Barrier System.

Proglaze® ETA Connections is a 40 durometer dense translucent silicone sheet used to bridge joints in building construction.

Proglaze® ETA is a patent-pending engineered transition assembly that simplifies transitions from the air barrier system to the window or curtain wall system, providing foolproof continuity and proven durability.

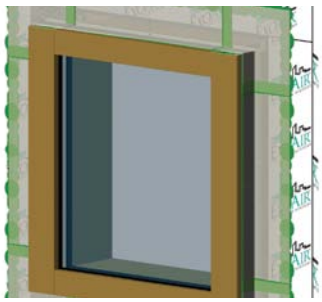
Compatible sealants, including Spectrem® 1 Silicone Sealant, Tremflex® 834 General Purpose Sealant and ExoAir LEF Low Expanding Foam. Contact your local sales representative or refer to application instructions for specific details.



ExoAir 120

ExoAir 110/
Termination Mastic

ExoAir TWF



Proglaze ETA

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