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## Technical Service Bulletin

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### Tremco ExoAir air barrier membrane gap bridging and joint movement considerations

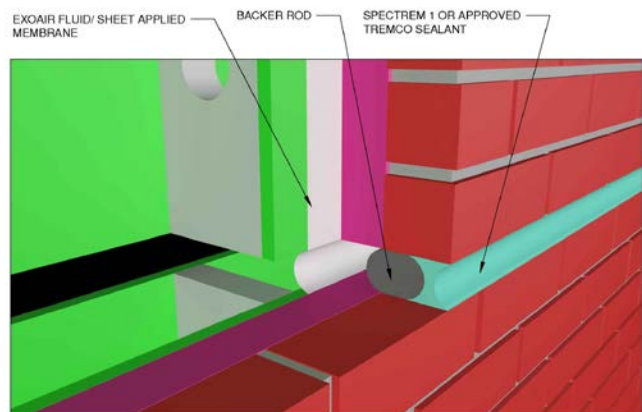
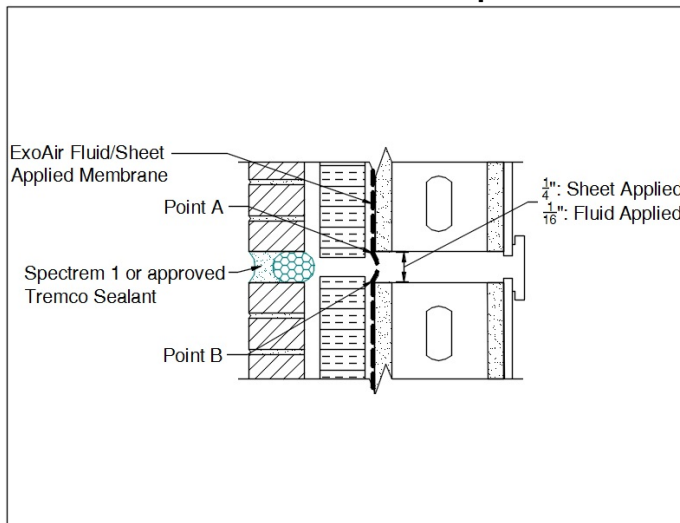
The purpose of this bulletin is to assist design professionals and contractors in selecting the best materials and installation practices for gaps and joints in the building structure. For this document, the following definitions will be used for clarification on the differences between a gap and a joint.

**Gap:** a separation of the substrate. This separation is not intended for any anticipated movement i.e. exterior sheathing butt joints.

**Joint:** a designed separation of the substrate in order to allow for thermal/moisture expansion or shear movement due to load on the structure i.e. a separation between aluminum and concrete.

There is no “one size fits all” connection approach that is both durable and cost effective. The following are effective ways to treat gaps/joints in the substrate while being cautious of successful, repeatable installation and cost.

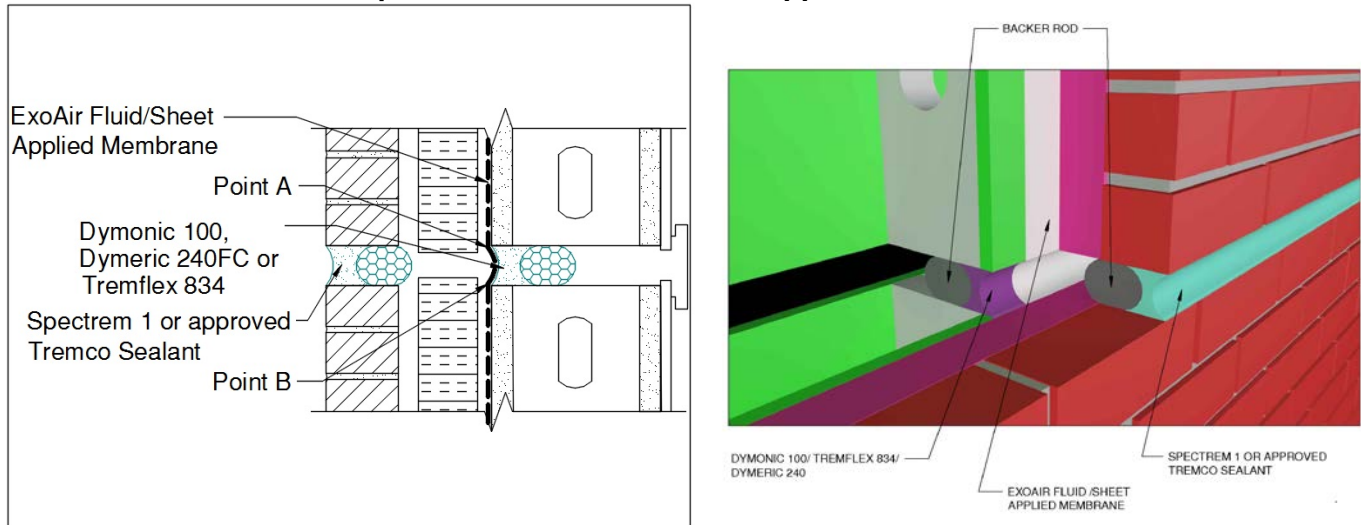
#### Gaps: Fluid/Sheet Applied Membranes



**Un-supported:** For gaps in the substrate that are less than:

- 1/4" (6.4 mm): Sheet Applied Membrane
- 1/16" (1.5 mm): Fluid Applied Membrane

## Gaps/Joints: Fluid/ExoAir 110 Applied Membranes

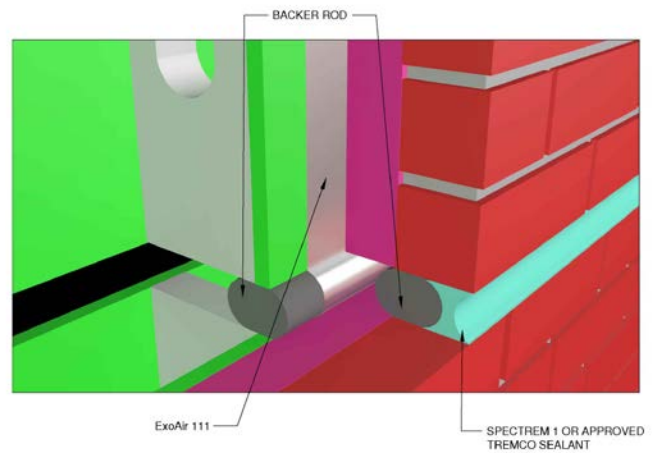
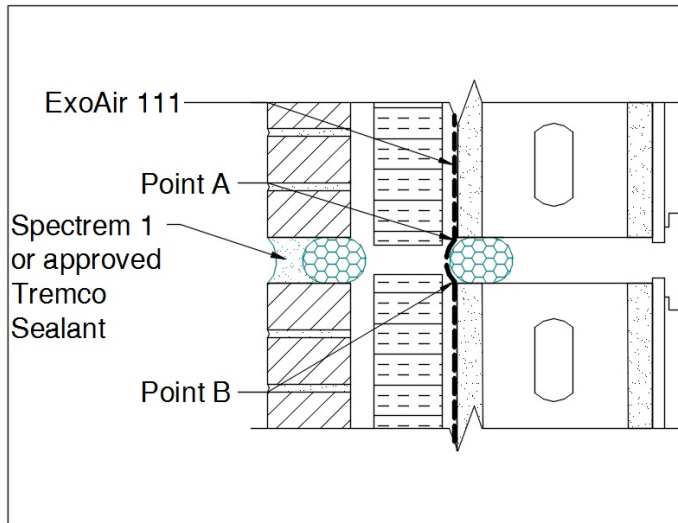


**Sealant:** For gaps greater than the un-supported limit but less than 1" (25 mm) or any joint less than 1" (25 mm). Dymonic 100, Dymeric 240FC or TREMflex 834 are acceptable sealant choices for use with Tremco's ExoAir air barrier membranes. Please select the sealant with the appropriate movement capabilities.

- Dymonic 100 (+100/- 50% movement)
- Dymeric 240FC (+/- 50% movement)
- Tremflex 834 (+/- 12% movement)

Tool sealant prior to installation of the ExoAir air barrier membrane. For installation of the ExoAir sheet applied membranes, a bellow will need to be installed in order to account for the movement. The sheet membrane will need a bellow that is 1.5 times longer from Point A to Point B than the gap/joint width. For instance, a 1/2" (12.7 mm) joint would need a bellow in the sheet approximately 3/4" (19 mm) long from Point A to Point B.

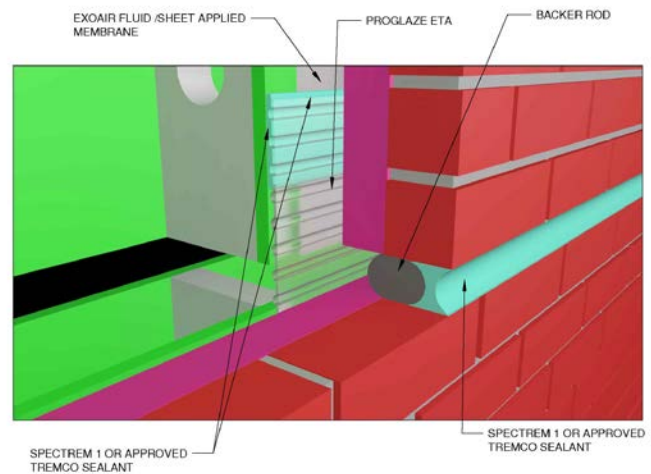
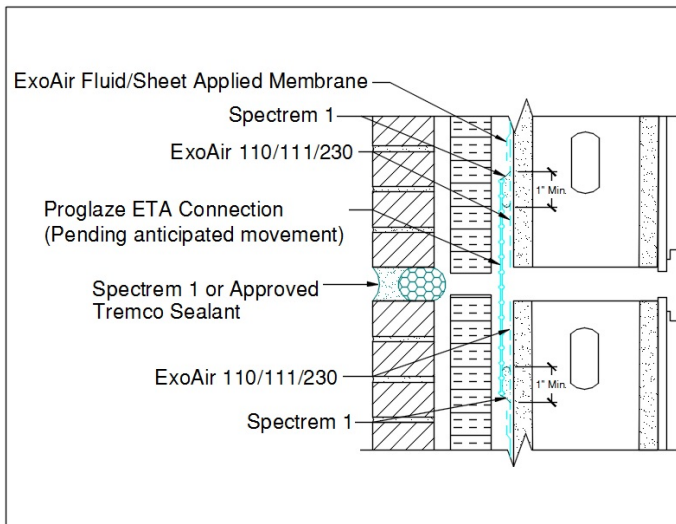
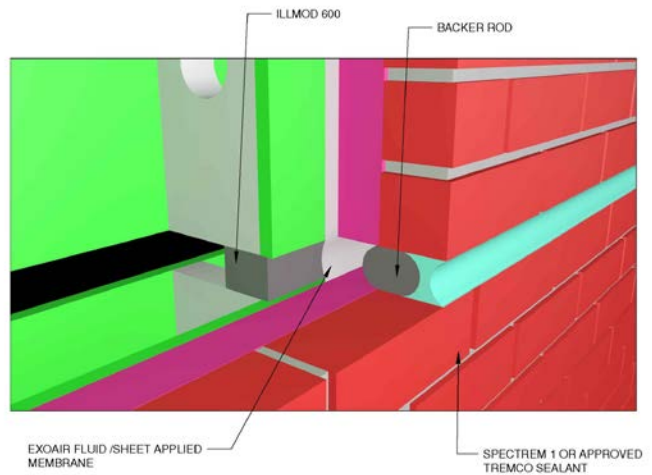
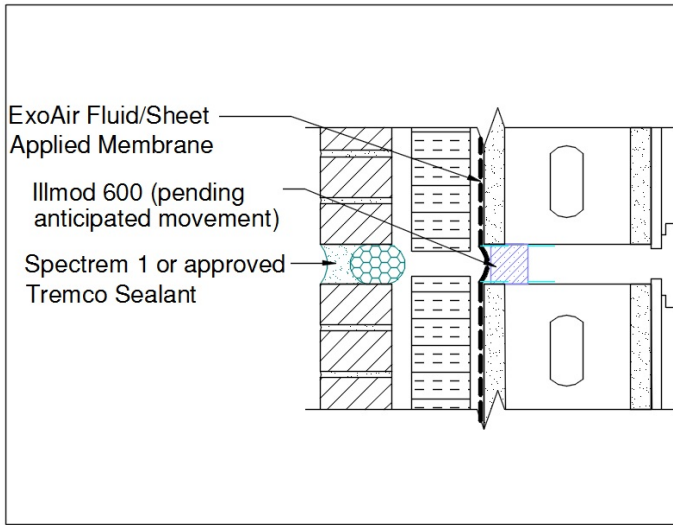
## Gaps/Joints: ExoAir 111 Applied Membrane ONLY



**Backer-rod:** For gaps/joints greater than  $\frac{1}{4}$ " (6.4 mm) but less than 1" (25 mm), an alternative to using sealant is to use open cell backer-rod in order to provide some support for the membrane during installation. This installation method should only be used on joints with movement not to exceed +/- 25%. The backer rod shall be placed proud of the substrate enough that the ExoAir 111 membrane makes a smooth transition from the substrate to the backer-rod. No area of the ExoAir 111 membrane should go unsupported for a span greater than  $\frac{1}{4}$ " (6.4 mm).

For installation of the ExoAir 111 sheet applied membrane, a bellow will need to be installed in order to account for the movement. The sheet membrane will need a bellow that is 1.5 times longer from Point A to Point B than the gap/joint width. For instance, a  $\frac{1}{2}$ " (12.7 mm) joint would need a bellow in the sheet approximately  $\frac{3}{4}$ " (19 mm) long from Point A to Point B.

### Joists: Fluid/Sheet Applied Membranes



**Illmod 600 or Proglaze ETA:** All joints greater than 1" (25 mm) are suspected of being designed for a large degree of anticipated movement. For these applications, Tremco typically recommends one of the following options:

- Illmod 600 (+/-25% movement, 1/8 to 2-5/8" [3.1 to 50.8 mm] joint)
- Proglaze ETA (varies based on system selection)

For sheet applied membranes: the sheet membrane should be wrapped into the rough opening prior to installation of the Illmod 600 or the Proglaze ETA.

For fluid applied membranes: the fluid membrane may be installed onto the face of the Illmod 600 once the Illmod product has been installed flush to the face of the substrate.

Please contact Tremco Technical Service at 866.209.2404 with any questions regarding this bulletin.