

Controlling Humidity and Condensation

Modern construction methods have resulted in tighter, more energy-efficient homes that require planning for the control of humidity and condensation. Because a Superior Walls wall panel is constructed with a high-performance concrete mix and lined with closed-cell foam insulation, it prevents the free flow of moisture through the wall panel. Though this is a good thing when seeking to keep ground water out of your basement, it also acts to keep moisture vapor inside the house.

In certain conditions of high interior humidity and low exterior temperatures, it is possible that condensation may form on the interior surface of the Superior Walls panel. Condensation can occur anytime moist air contacts a surface that has a temperature less than the dew-point of the air.

Condensation may be controlled in a number of ways:

1. By reducing the amount of moisture in the air:
 - a. Limit moisture-producing sources or activities like non-vented clothes dryers or hot-tubs.
 - b. Use a dehumidifier.
2. By preventing the moisture from reaching the cold wall surface:
 - a. Remove the moist air with an exhaust fan or other ventilation.
3. By increasing the temperature of the room:
 - a. Add heat and the air will hold more moisture.
 - b. Increase the room temperature and you will also increase the temperature of the wall surface.

For additional technical information, please see the Technical Resources section of our website:

<https://www.superiorwalls.com/resources/documents-center/>

It is usually most effective to use more than one of these methods in order to effectively control condensation.

“Original Equipment” Foam Insulation

Most Superior Walls products are tested to comply with the requirements of the 2024 International Residential Code - Section R303 (Foam Plastic). No additional thermal barrier is required UNLESS the product is labeled as requiring a thermal barrier or additional foam insulation has been added after the panel was manufactured.

Exterior Maintenance

- **Grade** – Slope the ground away from the home a minimum of 6 inches within the first 10 feet from the wall (additional slope may be required by your local building code). Re-grade if soil settles over time.
- **Gutters and Downspouts** - Keep gutters and downspouts free of leaves and debris. Splash blocks or downspout extensions should be used to divert water away from the foundation.
- **Shrinkage Cracks** - Shrinkage cracks are fairly common in concrete products. Shrinkage cracks pose no threat of structural damage or potential for leakage. This type of crack typically occurs during the curing process, is generally less than 1/16” in width, and is limited to the surface of the wall. This type of crack does not need any type of repair. However, if desired, cosmetic treatments may be performed using a stucco type material or masonry paint.
- **Sealant** - Sealant below the ground level that is not exposed to UV light will not require maintenance. Sealant in panel joints exposed to UV light above the level of the ground may experience surface discoloration or cracking. If UV damage has occurred, joints can be resealed with a quality one-part polyurethane masonry sealant.

Foundation Drainage

Drainage systems must stay clear of obstructions and remain free flowing.

Still have questions? Contact your Superior Walls representative for answers to your questions. Find your local representative at www.superiorwalls.com using the “LOCATOR” link. For more technical information and details, see the Technical Resources section of our website at <https://www.superiorwalls.com/resources/documents-center/>.