

Indoor airPLUS Technical Bulletin



Pest Entry Prevention



You aren't the only one trying to escape the heat. Pests and critters seek shelter from the summer sun in home cavities. Keep unwanted pests and critters from vacationing in your home.

Insects, rodents, and other pests are more than just a nuisance; they can carry diseases, aggravate allergies, and spread germs. These pests can cause considerable property and structural damage if their activities go undetected for any length of time. Air sealing and water management measures required as a part of Indoor airPLUS help keep pests outside of the home.

The Indoor airPLUS team is excited to share details and best practices related to pest entry prevention! Visit the [Department of Energy's Building America Solution Center](#) for more information.

Rodents, Birds, and Bats

Birds, rodents, and bats can carry bacteria, viruses, parasites, fungi, and allergens that can cause illnesses to home dwellers. If they get into homes, attics, basements, or ducts, they can also cause considerable property damage. If they get into a home's HVAC system, allergens and contaminants can quickly be dispersed throughout the home.

Pests can enter through surprisingly small openings. Gaps as small as ¼ inch (the width of a pencil) are enough for mice to squeeze through into the wall cavity or interior of the house. Rodents can chew through spray foam, wood, and some types of plastic. By means of tiny, airflow-sensing hairs on their wings, bats easily find the same holes that are the infiltration and exfiltration pathways for natural heat loss.



How to Reduce Entry

- Seal all holes that are greater than ¼ inch by ¼ inch with corrosion-resistant copper or stainless steel wire mesh.
- Seal all cracks around plumbing and wiring penetrations and cover the seal with escutcheons or metal flashing.
- Do not leave a rough surface that will trigger rodents' instinctual response to start chewing.
- Do not leave blown foam exposed to the sun. Exposure to the sun will break it down and insects and rodents may nest in the foam.
- Install door sweeps that touch the ground and go the entire length of the bottom of the door. If properly installed, the sweep will brush the ground, but not hold the door open (a fire hazard). Do not use vinyl sweeps in areas prone to rodent infestation.

Insects

While the use of chemicals and poisons are common conventional methods for preventing or treating pest infestations, relying on their use increases ongoing maintenance activities and costs for the homeowner and they can contribute to health and safety concerns of their own. Builders can take steps to reduce opportunities for pest intrusion and damage, without relying on chemicals.

The Building America Solution Center has several guides to help builders properly manage water drainage around the site and foundation; these can be accessed



through the [ENERGY STAR Water Management System Builder Checklist](#). The steps that builders take to seal the building envelope to prevent air leakage will also help to keep out insects and rodents. Several of these steps are described in the Building America Solution Center under the [ENERGY STAR Thermal Enclosure System Rater Checklist, TES 5. Air Sealing](#).

How to Reduce Entry

- Caulk small holes to seal out insects.
- Block insects from getting into walls through air gaps behind siding or draining vents in brick walls with wire screens.
- Construct the home so that it stays dry or dries out quickly. Wet wood attracts carpenter ants and is easier for animals to gnaw through.

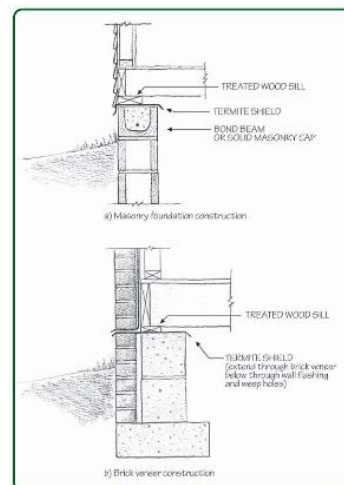
Termites

In areas with a high likelihood of termite infestation, building codes restrict where and how rigid foam can be installed along the interior and exterior of basement and foundation walls. Although termites don't eat the foam, they tunnel through it; therefore, its presence can hide their activities from building inspectors.

Information about restrictions related to rigid foam is found in the guides [Unvented Crawlspace and Conditioned Basements](#) and [Rigid Foam Board Interior Insulation for Existing Foundation Walls](#).

How to Reduce Entry

- Install termite-resistant mesh over joints in foundation, beneath the slab, and between the foundation wall and the sill plate.
- Choose termite-resistant heartwood from durable species such as cedar or redwoods.
- Take additional precautions as necessary based on your location in the [Termite Infestation Probability Map](#).



Learn more at:
www.epa.gov/indoorairplus