

# Air Sealing and Attic Prep

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Train the Trainer

## Learning Objectives

By attending this session, participants will:

- Understand basic principles of air leakage.
- Recognize typical air leakage sites in attics.
- Be familiar with the various tools and materials used in air sealing and attic preparation.
- Understand high-temperature issues and how to treat them.
- Understand safety concerns related to wiring.
- Know how to prepare an attic for air sealing and insulation.

## Key Terminology

Cubic Feet per Minute (CFM)

Indirect leakage

Direct leakage

Infiltration

Exfiltration

Knob & tube wiring

IC rated

Ventilation

## Supplemental Materials

### Handouts & Resources

Attic Air Sealing video

NFPA Combustion Clearance Tables

Van der Meer, Bill. "Air Leakage in Recessed Lighting." *Builder Brief* (BB0502) 2002. Pennsylvania Housing Research Center, Pennsylvania State University. [www.engr.psu.edu/phrc](http://www.engr.psu.edu/phrc).

Keefe, David. "Air Sealing in Occupied Homes." *Home Energy* Nov./Dec. 1995. [www.homeenergy.org](http://www.homeenergy.org).

### **Classroom Props & Activities**

Spray foam	Mastic and gloves
Foam board	Stapler
Sheet metal/foil/flashing	Weatherstripping
High temperature caulk	Tin snips
Utility flags	Utility knife
Insulation rulers	Flashlight
Zip ties & tightening tool	Dust mask and other safety gear

**Attic Air Sealing Video:** Discusses various air sealing materials, common sites for air leakage in attics, and one approach to insulating half-stories when knob and tube wiring is discovered.

### **Hands-On Props**

**Air Sealing Prop** – Break students into teams of 2-4, depending on the size of the prop, and have them create a continuous air barrier using appropriate air sealing materials.

**Installer’s Attic Prop** – For demonstration and hands-on work. After demonstration, break students into teams of four. Have groups seal and insulate ducts, cap recessed lights, seal plumbing penetration, install proper attic hatch, seal and dam the flue, and air seal the entire prop. Stress that quality is more important than speed.

### **Class Overview**

- Use the presentation to review basic principles of air leakage. Introduce common tools and materials used in attic preparation and the trouble spots that installers will find repeatedly on a job site: flues, recessed fixtures, mechanical chases, etc.
- Convey expectations of a properly prepared attic as one that is air sealed with fixtures and juncture boxes marked, dams around high temperature areas, and safe wiring. Show the provided “Attic Air Sealing” video during the classroom portion of training.
- Demonstrate proper attic preparation on the installer’s attic prop. Break students into teams of four to gain hands-on experience with the prop.