Manufactured Home Belly Insulation

PREPARATION

Manufactured-home floors should not be insulated if a plumbing leak cannot be repaired. Note: insulating manufactured home floors may help keep exterior moisture from moving up into the body.

Install a ground cover in the crawlspace. Six-mil black polyethylene UV-stabilized and opaque polyethylene, existing black 4-mil polyethylene may remain if it's in good condition.

- For non-ducted return systems (refer to 7.1 of BPA Residential Weatherization Specifications and Best Pratices Guide). If the floor contains a non-ducted return system, seal the opening to the crawlspace and provide return air to a central location in the home.
- Extend all condensate and/or water drains to the outside of the crawlspace.
- Extend all types of appliance exhaust ducts to outside of the crawlspace. For duct types, refer to 7.1 of BPA Residential Weatherization Specifications and Best Practices Guide.
- Seal all plumbing penetrations and ductwork in the belly or through the floor before installing underfloor insulation.
  - Repair or replace damaged skirting by bringing it as close to the ground as possible to reduce intrusion from animals.

Specification Checklist

Download Checklist

For details on all BPA requirements for this measure, please refer to the BPA Residential Weatherization Specifications and Best Practices Guide.

- [ ] Materials used to patch the rodent barrier must be vapor-permeable, durable and capable of supporting the insulation.
- [ ] Repair all large holes in rodent barrier with stitch staples and approved materials.
- [ ] Determine if the belly is best insulated from the edge or underneath, depending on clearance and access.
- [ ] Blow only fiberglass insulation in the floor cavity of a manufactured home.
  - Blow to a density, from either beneath through belly or through edge, to a density of 1.25 lbs/ft^3 to 1.75 lbs/ft^3.

RECOMMENDED

- [ ] Identify and flag any combustion-air vents for furnaces, water heaters or stoves/fireplaces. Confirm they extend below the finished belly material.
- [ ] If a crossover duct is present, seal and insulate or replace.
  - Replaced crossovers should be rigid sheet metal and insulated to R-11.
  - Ensure crossover ducts are well supported and not in contact with the ground cover or ground.

Connect with the local serving utility to confirm pre- and post-condition requirements.

Pre-Condition:	Post-Condition:
R-0 to R-7	R-11, R-22 or maximum possible
R-8 to R-11	R-22 or maximum possible

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MINIMUM REQUIRED DOCUMENTATION

You can use the Optional Weatherization Data Collection Tool to collect this information. Contact the serving utility for specifics on required documentation.

1. Documentation that the measure requirements have been met (e.g., manufacturer, model number, type, size and quantity of equipment or product installed or used).
2. Documentation of pre-and post-insulation R-values, and square footage of installed insulation.
3. Primary heating type.
4. Invoice showing order or purchase date, cost, post-condition.

PAIRS WELL WITH

- ☐ Manufactured Home Roof Insulation.
- ☐ Manufactured Home Heat Pump Installation.
- ☐ Heat Pump Water Heater for Manufactured Homes.

Installation Examples

Clean crawl, good ground cover.
Courtesy of Oregon Housing and Community Services and Oregon Energy Coordinators Association

Unprepped crawl, disconnected dryer vent, poor ground cover.
Courtesy of U.S. Department of Energy

Reparied and supported belly material.
Courtesy of Pennsylvania College of Technology

Belly is not whole.
Courtesy of Pennsylvania College of Technology

Insulating belly from edge fill method.
Courtesy of U.S. Department of Energy

Uninsulated belly with duct leakage.
Courtesy of Pennsylvania College of Technology

Properly fixing skirting.
Courtesy of Santa Fe Community College

No skirting around home.
Courtesy of Pennsylvania College of Technology