

Seal Electrical and Other Penetrations in Attic

Job Aid for Air Seal Attic Floor Badge

Aligns with Standard Work Specifications 3.0101.1, 6.0201.1, 6.0201.2



Electrical, plumbing, and HVAC penetrations are often oversized.



For smaller gaps, caulk is enough to seal the hole.



Holes larger than 1/4 inch may require support for the sealant.



Inserting backer rod provides infill to support the sealant.



Seal to cover entire opening, including all backer rod.



Other penetrations such as plumbing vents can be sealed using foam or caulk with backer rod as described in step 4.



Checklist

Air seal attic floor

DESIRED OUTCOME

Holes, penetrations, chases, cracks, gaps, and joints sealed to prevent air leakage and moisture movement between the attic and conditioned space.¹

Job Site Requirements²

Existing insulation was removed as needed to access air sealing locations.		
All wall cavities are enclosed on all sides (e.g., have top and bottom plates). Additional blocking was installed where necessary.		
The following cracks, penetrations, and chases are sealed according to the work order to prevent air movement with the appropriate materials based on hole sizes according to the MATERIALS GUIDELINES table at right: Top plates of all walls Tongue and groove ceilings		
Recessed lights Plumbing vent pipes Electrical penetrations Exhaust fans	AIR SEALING MATERIALS GUIDELINES	
	HOLE/GAP SIZE	MATERIALS/NOTES
	1/4" or less (small)	Caulk
	1/4" to 2" (medium)	One component foam or mastic
	2"-3" (large)	Two-component foam
	3" or larger (extra-large)	Infill material installed that will not bend, sag, or move Support material (e.g., 2X4) installed for spans wider than 24"
Ductwork penetrations into attic Any other holes/penetrations in the attic plane/boundary		
Vork area cleaned.		

- 1. Relevant Standards: 3.0101.1, 6.0201.1, 6.0201.2
- 2. High-temp areas and attic hatches are addressed in separate badges.

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For more information, visit: energy.gov/scep

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