

Technical Bulletin: Insulation grading and top plate gaskets

Residential New Construction Program

BUILDING A SMARTER ENERGY FUTURE™

Insulation installation and canned foam top plate gaskets have the potential for large impacts on energy savings and incentives in the RNC Program. This technical bulletin covers some frequently overlooked items that raters should check when inspecting insulation and canned foam top plate gasket installation.

Common insulation problem areas (followed by visual examples):

1. **Electrical wires, Termite Systems, and 2x4 obstructions:** Areas approximately 1' from the bottom plate tend to have termite systems or 2x4 obstructions. In addition, electrical wires can easily be found by looking for metal plates on studs. Insulation should be cut to fit around these obstructions to comply with RESNET's grade I definition. For a video description on RESNET's grading definitions, follow this [link](#).
2. **Rolled or tucked batts:** Inspect the top and bottom of wall cavities. Often, insulators roll or fold insulation into the bottom or top of wall cavities instead of trimming insulation to fit cavities properly.
3. **Overfilled cavities:** To save time, insulators will place small pieces of batts behind wires and place a full batt over top of the wire. This does not constitute grade I installation and causes compressions and overfilling.



An example of termite systems and a 2x4 obstruction



An example of an overfilled cavity with a plate highlighting the wire location



An example of batts not cut to fit wall cavities with plates showing wire locations

Top Plate gasket best practices:

- **Interior vs Exterior walls:** Installers sometimes apply top plate gaskets on the exterior walls only. The interior walls can account for as much as 70% of all gaps between the drywall and top plates. The leakage that the gasket prevents is between the living space and the attic, so interior walls are just as important as exterior walls.

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- **Foam location:** Its best practice to apply a ¼" bead of foam in the middle of the bottom course of the top plates. Some installers apply the foam at the seam of the top plates, which may prevent the foam from uniformly contacting the drywall and should be avoided.



An example of top plate gasket missing on interior walls.



An example of foam applied at the seam of top plates.