

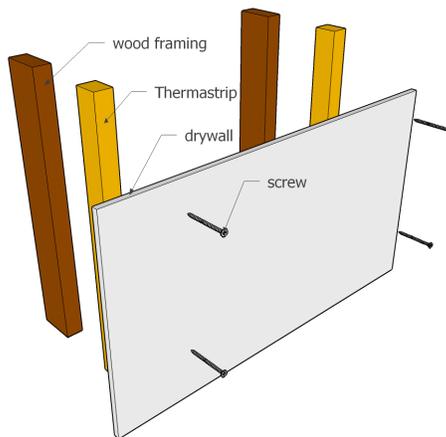
The Company

SolidJoint Research, Inc. was founded in 2007 by researchers from the Massachusetts Institute of Technology and Rensselaer Polytechnic Institute. Our goal is simple:

SolidJoint Research, Inc. develops building technologies for the residential construction industry that are more economical, greener, and easier to use than anything done before.

Thermal Bridging

Conventional light wood frame structures lose a significant amount of heat due to thermal bridging through the studs, joists, and rafters. The members conduct heat, bypassing cavity insulation and reducing the insulative capability of walls, floors, and ceilings by 40% or more. While a number of approaches exist to reduce thermal bridging, only Thermastrip™ offers a cost-saving solution that requires little change to current building techniques.



In most of Colorado, residential building code requires either a 2" x 6" R-19 construction or a 2" x 4" with R-5 exterior foam sheathing. The extra wood in the 2" x 6" is most often used just to provide extra thickness for insulation, rather than for structure! Use Thermastrip™ with 2" x 4"s to create effective 6" wall and achieve better insulation than code while saving money on framing lumber. Call us for the additional benefits possible with Thermastrip™ in commercial building construction with metal studs.

What is Thermastrip™?

Thermastrip™ is a patent pending insulating strip applied to the inner surface of wood framing, between the drywall and the wood. This provides a thermal break, which reduces overall heat loss through the walls, floor, ceiling and rafters by as much as 40%. At the same time, wood use is reduced, reducing cost. A self adhesive strip on the the lumber side provides for quick and easy installation. The Thermastrip effectively replaces the need for exterior foam sheathing, with only 1/4 the material.

Benefits of Thermastrip™

- 2x4 R-Value increases from R-4 to R-17
- Less expensive and faster to install than other solutions like rigid foam sheathing and *no waste*
- More effective usage of forest products and embodied energy of foam insulation
- Excellent noise attenuation

Get rid of blueboard?

Yes. R-3 blueboard for a typical house costs over \$500 in material and takes **20 hours** of labor to install. Thermastrip costs the same in materials but takes only **4 hours** of labor, saves hundreds of dollars of lumber, and gives an R-6 improvement.

What does it cost, where can I buy it?

We're actively looking to implement Thermastrip in prototype homes. We're currently selling 8' strips for \$1.25 and are equipped to handle small runs with our pilot process. The cost of the strips is made up in savings when using a 2" x 4" instead of a 2" x 6" (and the price will become even lower when we go to full production). Contact us to find out more about availability. Or join the email list online.



Thermastrip™ Specifications

Property	Value	Explanation
Insulation value		
2x6 R-19 wall	13.2	Equivalent clear wall cavity plus framing insulation value. Used RESCHECK methodology to evaluate with a framing factor of 0.25.
2x4 + Thermastrip R-19 wall	18.6	
Percent improvement	41%	
Insulation strip		
Stabilized R-value, 2", ASTM C236/C518	13.0	Insulation is DOW Tuff-R Polyisocyanurate insulation. Values taken from DOW spec sheet and from ICC-ES Evaluation Report NER-616.
Compressive strength, ASTM D1621	25 psi	
Water absorption, ASTM C272	0.05% by vol.	
Water vapor permeance, ASTM E96	< 0.03 perm	
Flexural strength, ASTM C203	55 psi	
Flame spread index, ASTM E84	< 75	
Smoke-developed index, ASTM E84	< 450	
Adhesive		
Width	3/4"	Designed to provide a temporary, repositionable bond. Drywall screws or nails provide the final securing. Material is Scapa acrylic transfer tape 4450.
Thickness	1.6 mil	
Peel strength	25 oz/in	

Installation requirements and recommended details

Thermastrip must be protected from the interior of the building by 1/2" of gypsum wallboard for fire protection by code. Fire blocking of at least 2" nominal lumber is required between stories. It is recommended that the entire cavity be filled with fiberglass, cellulose, or spray polyurethane foam insulation. 3 1/2" drywall screws are required to completely penetrate through the drywall and Thermastrip into the studs. Drywall screws should not be placed within 3" of the drywall corners to prevent over-compression of the insulation.

