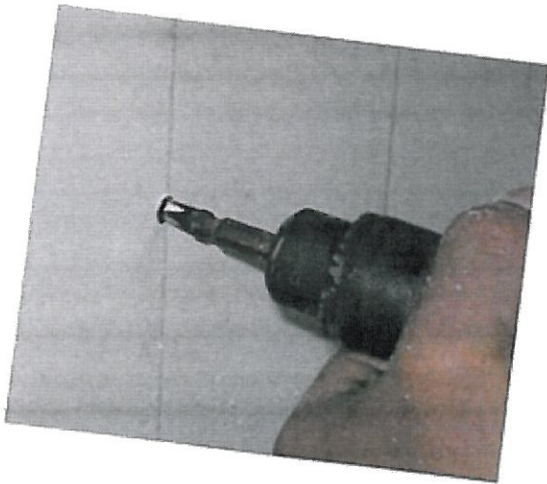


# Magnesium Oxide Board: Build Healthy Walls

by Tracy on October 10, 2011

I bet you never considered drywall to be a potentially toxic product until the **Chinese drywall** problem raised its ugly head back in 2008. Unfortunately, we're still not out of the woods for drywall made here or in China. Even today, gypsum board can contain mercury and formaldehyde that in turn off gases into your home.

**Mercury Content in Drywall:** In 2009 the EPA [tested drywall products from both China and the US](#). Some showed very low levels of 0.0668 to 0.562 parts per million and one American-made product contained a very high level of 2.08 ppm.



Courtesy of Magnum Building Products

The drywall with the highest mercury content was made from **synthetic gypsum**, which is created from a waste product of coal-burning plants. Some green home certifications specify levels below a specified amount. For example, the **Florida Green Building Coalition** provides green points for using recycled content drywall throughout the house, if the Mercury levels in the drywall are less than 0.562 parts per million (ppm).

**Formaldehyde in Drywall:** Also in 2009, EPA testing did find formaldehyde in the core boards of American-made drywall products. The State of California [tested gypsum drywall boards](#) for formaldehyde emissions in 2003 and found products emitting more formaldehyde than was safe by the state's standards. Lovely thought, isn't it.

I'd like to say that improvements in drywall manufacturing have been made across the board since 2009 reducing or eliminating these toxins, but content still depends on the manufacturer.

In addition to its potentially toxic content, drywall is flammable, the paper coating provides a food for mold, moisture causes it to disintegrate and termites find it quite tasty. In spite of these properties, it has served us well for years.

**Magnesium Board to the Rescue:** However, we now have a better choice. What if I told you you could contribute to your home's **indoor air quality** and durability by selecting a drywall that is completely non-toxic (no off gassing), impervious to moisture and pests, non-flammable and does not offer a food source for mold? I know this sounds too good to be true but it actually does exist and is known as **magnesium oxide board**.

This product has many uses but is a particularly good choice for showers. Unlike cement board, it has no degree of porosity and the screws can be countersunk.

## Magnesium Oxide Board: Build Healthy Walls

The downside is cost. Right now it's running about 3 times more than traditional drywall but obviously, there is no comparison. It is extremely popular for commercial use and in custom residential construction. It's available in thicknesses ranging from 1/8 inch (easily contoured over curved surfaces) to 3/4 inch.

In addition to drywall, the base magnesium product is made into exterior sheathing, soffit material, fascia and lap siding. Very interesting stuff. One manufacturer calls their product **Magnum Board**. Read more at, <http://www.magnumbp.com/products/mb-applications.htm>.

Tagged as: [durable home construction](#), [Green Home Construction](#), [healthy home construction](#), [Indoor air quality](#), [moisture mitigation](#), [remodeling](#), [Water management](#)

## About Me



Tracy DeCarlo has worked in various facets of the residential construction industry for more than 15 years. She is currently the owner of Detailed Solutions, Inc. and One Stop Green Home Certification, as well as the author of *Don't Forget the Linen Closets* and *The Difference is in the Details*. In addition to her expertise as a Home Design Function Analyst and a Certified Aging-in-Place Specialist, Tracy is also a Certified Green Professional helping builders make the transition from traditional to green building and achieve green certification for their homes.

### The Birth of Detailed Solutions

Over the years Tracy has met many talented architects, builders, and designers, all of whom cared about their products and their customers. Despite the best efforts of these professionals, however, Tracy continued to observe that at the end of each building or remodeling project:

- (1) Costs often far exceeded budget.
- (2) Most homeowners moved in with a laundry list of things they wished they'd thought of or been offered before it was too late.

It wasn't long before Tracy identified the problem: There's a huge information gap in the residential building process and it's nobody's fault. It's a big world out there and there simply aren't enough hours in the day for the builder, architect, or interior designer to sit down and explain to the homeowner everything they need to know. Unfortunately, this results in homeowners making multiple decisions without knowing the right questions, let alone the right answers.

Detailed Solutions was formed to fill this information gap by providing homeowners with the ideas, tips, reminders, and education otherwise missing from the normal home building or remodeling process. Through her books and seminars, Tracy addresses the functional aspects of home construction, design, and usage from the ground up, including items such as green building, energy efficiency, disaster mitigation, air quality, aging in place, plumbing, electrical, lighting, and storage. Using her industry knowledge, personal building experiences, and the techniques outlined in her books, she helps homeowners take control of the budget process while at the same time creating an energy-efficient, healthy environment that meets their unique needs.

### Proven Results

When Tracy and her husband Mike set out to build their own custom home in 2003, they incorporated many of the techniques and suggestions she offers to her clients. The result: Not only is their home very easy to live in, it was completed on time, with only a single change order, and at less than 1 percent over budget! Planning the details in the beginning can save thousands in the end is more than a company motto. It's the basis from which Tracy approaches everything she does to help homeowners have a successful building or remodeling experience.

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