

## DensDeck® Roof Board Starves Mold

Using inorganic components helps limit mold in roof systems.

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Mold is everywhere. Fungi including mold make up approximately a quarter of life on earth. Some molds contribute significantly to our quality of life. For instance, foods such as cheese use mold to achieve their rich flavors. Actually, life would be pretty tough without mold. Since it's a vital element in the breakdown of organic matter, it can be used efficiently by the next generation of plants and animals.

On the other hand, not all fungi make a positive contribution to everyday life. Recently there has been increasing interest in the potential damaging effects that a small number of mold species can have in commercial roofing systems—effects that may raise concerns for those involved in the industry.

In light of this interest, building owners, consultants and roofing contractors may want to look at roofing components that can assist in restricting the growth of harmful mold. In commercial roof systems, there are steps you can take to help control mold. One of them is to use DensDeck® Roof Board in your roof system. Here's why.

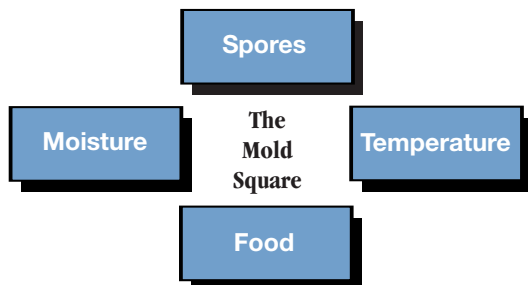
### Understanding the four factors important to combat mold

Scientists say that mold needs four key factors to grow:

- Mold spores
- Correct temperature range
- Moisture
- Organic food

If any one of these four is missing, mold growth is inhibited. But each of these factors is difficult to control. Mold spores are always present in both indoor and outdoor air. And molds can flourish in any ambient temperature from about 40°F to 100°F (4°C to 38°C).

You can have some control over moisture, but roof components are expected to get wet—whether during installation, from a leak, or when warm, moist interior air condenses inside a roof assembly. (See February 2002 *Tech Talk* on



Mold requires four conditions to grow. Controlling the food factor by using an inorganic substrate can help control mold growth in roof assemblies.

moisture resistance in roof systems.)

One of the most controllable factors in mold growth is the use of inorganic materials. Patented features of DensDeck include glass mat facings and a treated core that, when tested per ASTM D 3273, indicated virtually no mold growth.

### Tests show DensDeck can stand up to mold

Tests conducted by SGS U.S. Testing Company, Inc., an independent testing service, have indicated that DensDeck effectively impedes the growth of mold.

The resistance to moisture absorption of DensDeck also contributes to mold resistance because it reduces retained water in the roof assembly. Other types of roof boards include compressed organic fibers held together with a binder. In the presence of high humidity water vapor, they absorb and hold moisture. Based on ASTM C 473 "Water Absorption Percent by Weight Tests" conducted by Georgia-Pacific Gypsum, perlite and wood fiberboard absorbed approximately seven times more moisture (by weight) than DensDeck.

### What you can do about mold

As concerns regarding mold growth become more prevalent in construction, consultants, specifiers and contractors will be requested to do what they can to restrict mold growth in roof systems. In most cases, prevention would be much more economical than a cure.

Proactive control of mold calls for controlling moisture and nutrient sources wherever you can. Here are some steps you can take:

- Design roof assemblies with ventilation and properly installed vapor retarders to eliminate condensation buildup. If a roof assembly is adequately ventilated, condensation will evaporate as part of the normal temperature cycle.
- Keep moisture out in the first place. Train crews to protect materials from wet weather. Do not install during wet weather.
- Repair leaks promptly. Mold spores germinate quickly.
- Because some moisture is inevitable, either from installation or condensation, use roofing components that will retain as little moisture as possible. If materials are moisture-resistant, it will cut down on retained moisture.
- Specify DensDeck in your roofing assemblies as part of your overall mold resistance strategy.

### DensDeck protection is cost effective

It may take years for the true cost of not using mold-restrictive materials in a roof assembly to surface. When you factor in construction defect claims and insurance costs, the added protection of DensDeck looks very cost effective.

Among leading roof board products, DensDeck—with its low moisture absorption, high strength and superior fire protection—can improve any roof system. For more than 15 years in hundreds of millions of square feet of roof systems in all types of environments, DensDeck has proven itself to be the most versatile and highest performing roof board on the market. In addition, it's the best substrate available for resisting the growth of mold. With attributes like that, you can easily see why DensDeck is approved by virtually every major commercial roofing system manufacturer and is the board of choice in a wider variety of systems than any other roof board on the market today.



#### SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: **1-800-876-4746** West: **1-800-824-7503**  
South: **1-800-327-2344** Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**  
Quebec Toll Free: **1-800-361-0486**

#### TECHNICAL INFORMATION

Georgia-Pacific Gypsum Technical Hotline  
U.S.A. and Canada: **1-800-225-6119**  
[www.gpgypsum.com](http://www.gpgypsum.com)

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**CAUTION: For product fire, safety and use information, go to [gp.com/safetyinfo](http://gp.com/safetyinfo).**

#### HANDLING AND USE

**CAUTION:** This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

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