

New Green Building Products

✕ musingsheader image

New Green Building Products

Every energy-efficient home needs a tight air barrier. Here are some products that might help: a cover for recessed cans, a caulk for polyethylene, and a handful of new housewraps

Posted on Sep 10 by Martin Holladay, GBA Advisor

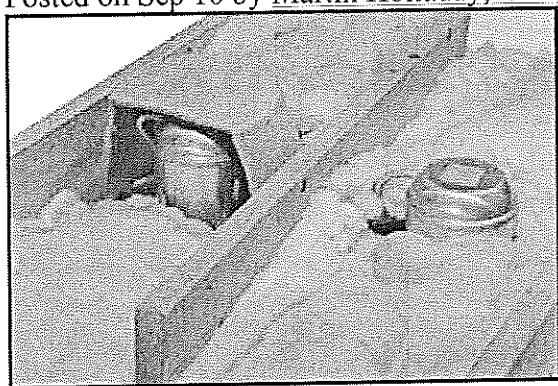


Image 1 of 6

A cover for recessed can lights. The manufacturer of the Tenmat cover for recessed can lights has chosen to illustrate the product with one of the worst fiberglass-batt insulating jobs ever photographed. The Tenmat cover has been cut vertically to illustrate how it fits over the light fixture.

In this new-product roundup, I'll look at a cover for recessed can lights, a new caulk for polyethylene, and several new water-resistive barriers (WRBs) that promise better performance than Tyvek or Typar.

A fire-resistant hat for recessed can lights

A Delaware manufacturer named Tenmat is selling an airtight hat for recessed can lights. Tenmat light covers are made from mineral wool; according to the manufacturer, they are fire-resistant.

Tenmat covers are installed from the attic. After making a slit in the cover to accommodate the electrical cable, the cover is pushed down to the drywall ceiling. The cover should be glued to the drywall with canned foam or thermal caulk. Needless to say, the slit or hole made for the cable needs to be sealed with housewrap tape or canned foam.

Once the Tenmat covers are installed, the ceiling can be insulated with almost any type of insulation, including fiberglass batts, cellulose, or spray polyurethane foam.

Tenmat covers come in two sizes: “regular” (9 inches high and 14 inches wide) and “oversized” (10 3/4 inches high and 16 inches wide). Energy Federation Incorporated sells regular size Tenmat covers for \$19.65 each.

Besides the high price, there’s only one catch to Tenmat covers: the covers can only be used for recessed can fixtures equipped with CFL Compact fluorescent lamp. Fluorescent lightbulb in which the tube is folded or twisted into a spiral to concentrate the light output. CFLs are typically three to four times as efficient as incandescent lightbulbs, and last eight to ten times as long. CFLs combine the efficiency of fluorescent light with the convenience of an Edison or screw-in base, and new types have been developed that better mimic the light quality of incandescents. Not all CFLs can be dimmed, and frequent on-off cycling can shorten their life. Concerns have been raised over the mercury content of CFLs, and though they have been deemed safe, proper recycling and disposal is encouraged. or LED bulbs. If a homeowner inserts an incandescent or halogen bulb in the fixture, it can overheat.

Dow Corning 758 caulk

Dow Corning has come out with a new caulk that sticks to a great variety of materials, including polyethylene.

FOR MORE INFORMATION

Cosella-Dörken Products

4655 Delta Way
 Beamsville, Ontario L0R 1B4
 Canada
 Tel: 905-563-3255 or 888-433-5824
info@cosella-dorken.com

Dow Corning

P.O. Box 994
 Midland, MI 48686-0994
 800-248-2481

Henry Co.

909 North Sepulveda Boulevard
 El Segundo, CA 90245
 800-486-1278

Tenmat

23 Copper Drive
 Newport, DE 19804
 302-633-6600

VaproShield

915 26th Ave. NW, Suite C5
 Gig Harbor, WA 98335
 866-731-7663

The new sealant, Dow Corning 758, is a silicone caulk that the manufacturer claims will stick to polyethylene, polypropylene, vinyl Common term for polyvinyl chloride (PVC). In chemistry, vinyl refers to a carbon-and-hydrogen group ($H_2C=CH-$) that attaches to another functional group, such as chlorine (vinyl chloride) or acetate (vinyl acetate)., polyolefin housewrap (for example, Typar), peel-and-stick flashing (including Vycor and Tyvek window flashing), and peel-and-stick membrane (including Ice and Water Shield). The broad range of materials to which it sticks makes the caulk particularly useful for window installation.

Dow Corning 759 is said to be a low-VOC Volatile organic compound. An organic compound that evaporates readily into the atmosphere; as defined by the U.S. Environmental Protection Agency, VOCs are organic compounds that volatilize and then become involved in photochemical smog production. product.

A warning to anyone seeking technical information from Dow Corning on this product: my repeated attempts to obtain answers to a few basic questions about 758 sealant were ignored by the company. If any GBA GreenBuildingAdvisor.com readers can provide further information, please post a comment below.

Delta-Fassade S

Did you ever wonder why housewrap manufacturers can’t come up with a tougher product — something that doesn’t rip away from nail heads or get damaged by ladders?

If you’re tired of Tyvek and Typar, and willing to pay for something tougher, you might want to look at four housewraps from Cosella-Dörken Products.

sales@vaproshield.com

In ascending order of price, Cosella-Dörken's tear-resistant weather-resistive barriers are Vent S, Delta-Foxx, Delta-Maxx, and Fassade S.

Rated at 69 perms, Vent S costs about 45 cents a square foot — roughly three or four times the price of Tyvek or Typar. Delta-Foxx (214 perms) is more permeable than Vent S, but also pricier — between 65 and 90 cents a square foot. In Europe, Delta-Foxx is used on roofs as well as walls.

At 14 perms, Delta-Maxx has a lower permeance than Cosella-Dörken's other WRBs. However, it has the greatest tear resistance.

If you need a WRB that can withstand a certain amount of UV exposure — for example, a WRB for use behind open-joint cladding Materials used on the roof and walls to enclose a house, providing protection against weather. systems — you can use Cosella-Dörken's top-of-the-line WRB, a product called Fassade S. Delta Fassade S (74 perms) costs between \$1.10 and \$1.20 a square foot.

Fassade S has UV inhibitors that allow it to be installed behind unusual cladding systems — for example, a screen made of gapped boards that admit some sunlight. Gaps may be up to 2 inches wide. “Basically it is designed to be exposed to some sunlight throughout its life,” said Peter Barrett, product manager.

Although it can withstand quite a bit of UV exposure, the manufacturer recommends that it be covered with cladding within 3 months of installation. Fassade S does not qualify as an air barrier Building assembly components that work as a system to restrict air flow through the building envelope. Air barriers may or may not act as a vapor barrier. The air barrier can be on the exterior, the interior of the assembly, or both..

To make sure that fastener penetrations are watertight, the manufacturer recommends the use of tape or a foam gasket between the WRB and any girt or strapping attached to the WRB.

Building scientist John Straube tested Fassade S by attaching it to the exterior of a small trailer. After driving the trailer for more than 6,000 miles, through snow and heat, he says that the housewrap “is still going strong. There was not a bit of deterioration or fraying that I could see in the wrap.”

WrapShield SA

VaproShield is selling a self-adhered WRB called WrapShield SA. Although it's a peel-and-stick product, it's not a rubberized membrane; it's a vapor-permeable housewrap.

The fact that it is a self-adhered wrap gives it several advantages: since it's self-adhering, fewer fastener penetrations are required to install it; it doesn't flap in the wind or suffer from “wind pumping” problems; and it's very airtight.

In addition to being a WRB, WrapShield SA can be used as part of an air barrier system. According to the manufacturer, it sticks well to plywood, OSB, DensGlass sheathing Material, usually plywood or oriented strand board (OSB), but sometimes wooden boards, installed on the exterior of wall studs, rafters, or roof trusses; siding or roofing installed on the sheathing—sometimes over strapping to create a rainscreen. , and concrete blocks. No primer is necessary.

WrapShield SA seals well around small fasteners, although larger fasteners like #12 or #14 screws might require sealing. WrapShield SA works well with a rainscreen Construction detail appropriate for all but the driest climates to prevent moisture entry and to extend the life of siding and sheathing materials;

most commonly produced by installing thin strapping to hold the siding away from the sheathing by a quarter-inch to three-quarters of an inch. application; the manufacturer also makes a vinyl batten called VaproBatten to complete the installation.

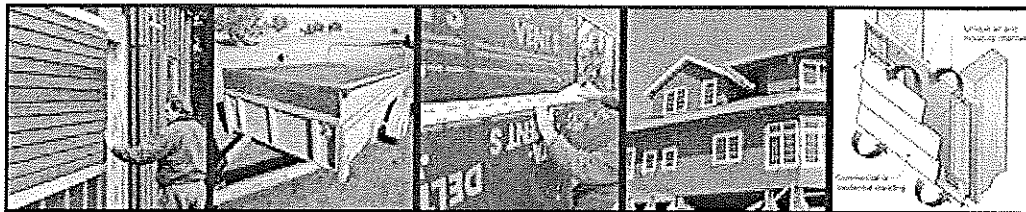
WrapShield SA is rated at 50 perms and costs between 82 and 95 cents per square foot.

Henry Blueskin VP

Henry Company, a manufacturer with plants in Ontario and El Segundo, Calif., also manufactures a self-adhered WRB, similar in many ways to WrapShield SA. Henry Company's product is called Blueskin VP.

Blueskin VP has a permeance of 29 perms. It needs to be applied at temperatures of 40°F or warmer. Like WrapShield SA, Blueskin VP has a peel-away paper backing; it can be adhered to a wide variety of substrates (including OSB, plywood, DensGlass, and concrete blocks) without fasteners. A primer must first be installed if the product is used over concrete or concrete blocks.

Last week's blog: "Using Rigid Foam As a Water-Resistive Barrier."



Tags: can light, caulk, housewrap, polyethylene, recessed can, sealant, water-resistive barrier, WRB

Image Credits:

1. Tenmat
2. Cosella-Dörken Products
3. John Straube
4. VaproShield