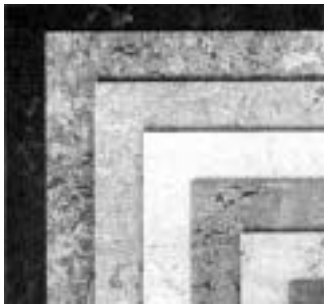
The Journal's pick of curious, interesting, and useful products

Environment-Friendly Building Materials

by Steve Loken

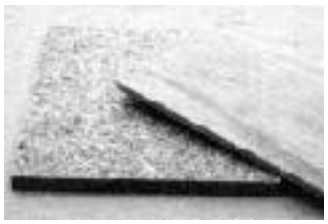
Higher dumping fees, dwindling lumber reserves, and widespread environmental awareness are encouraging more of us to pay attention to where our building materials come from and where they are going. There is already a surprising number of off-the-shelf building products made from recycled or readily-renewable resources. Many of these materials require less energy to produce, and create less environmental impact, than similar products made from virgin resources. Here are a few such resource-efficient building products:

Old-Fashioned Linoleum



Forbo makes a high-quality linoleum that probably isn't too different than the stuff your grandmother used to have. It's made from all natural ingredients, including linseed oil from flax, pine resins, wood flour from deciduous trees, and cork. These are mixed with clay and chalk fillers and pigments, bonded to a jute backing, and cured at low temperatures. The extended curing time and high proportion of linseed oil produce a flexible, durable, and non-toxic resilient floor covering. A variety of marbleized and solid colors are available. For more information, contact Forbo N.A., PO Box 32155, Richmond, VA 23294; 800/233-0475.

Strawboard



Folks along the Willamette River in Oregon have been decorating their walls with rye grass straw ever since Leonard Opal began pressing straw into 1/4-inch veneered paneling back in 1977. The panel material, dubbed *Meadowood*, began as a scheme to dispose of excess straw. The Willamette Valley grows about 80% of the world's lawn grass seed and the straw left standing after the seed has been extracted was traditionally burned on the fields to cleanse the crops of insects and disease. Afterwards, the ash served as a fertilizer. But tougher air quality standards in the region have forced grass seed farmers to look for new ways to use the straw.

Straight off the press, Meadowood has a Class C fire rating. (Straw contains a high concentration of silica which chars when exposed to a flame.) And unlike most particleboard and some waferboard, the strawboard has very stable edges. According to the manufacturer, you can drive a 16d nail in 1/4 inch from the edge of a panel without it splitting out.

The company is experimenting with a structural building panel, in addition to the interior panel currently available. Half-inch-thick prototype panels reportedly have the same structural integrity as a medium-density waferboard. And preliminary tests show that an oriented-strand strawboard may have even greater strength. For more information, contact Meadowood Industries, 33242 Red Bridge Road, Albany, OR 97321; 503/259-1303.

Pallets Into Hardboard

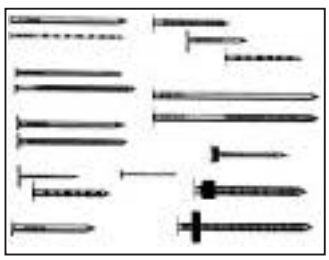
Wood Exchange — a company launched by *Evanite Fiber Corporation*, a hardboard manufacturer, and *Bilet Products*, a pallet maker — collects and chips "clean" waste wood, such as broken palettes and cable spools, and passes the material on to Evanite, who presses the wood fiber into 1/8- and 1/4-inch hardboard. In addition to supplying lumberyards with standard 4x8 sheets of hardboard, Evanite sells to LVL laminators who use the hardboard as a face veneer. According to one laminator, much of the smooth-faced LVL is used by door and window manufacturers as a substrate for clad jambs. For more information, contact Evanite Fiber Corp., Hardboard Division, PO Box E, Corvallis, OR 97339; 503/753-0314.

Carpet and Pad

Image Carpets are made from recycled polyethylene terephthalate (PET) plastic, otherwise known as plastic soft drink and ketchup bottles. The plastic is chipped up, extruded as a fiber, and spun into yarn. According to the manufacturer, the 100% recycled plastic yarn is naturally stain-resistant and diffuses static build-up. Image makes several types of carpet, including deep pile *Duratron* and commercial-grade *Preservation*. For more information, contact Image Carpets Inc., PO Box 5555, Armuchee, GA 30105; 800/722-2504.

Along with the carpet, you'll need a pad. *Dura Undercushions* makes an open-cell carpet padding from ground rubber tires bonded with latex and backed with a fiberglass and cellulose mesh. The Dura padding can be installed using either a "tackless" strip or by the double-stick method, and is compatible with a variety of adhesives. For more information, contact Dura Undercushions Ltd., 8525 Delmeade Road, Montreal, Quebec H4T 1M1; 514/737-6561.

Industrial Re-Melt Nails



Maze — the largest hot-dip galvanizer of nails in the U.S. — has been making nails since 1848 from recycled steel. In fact, recycling continues all the way through their manufacturing process. All their nails are cut from a cold-formed rod made from melted scrap steel. The acid used to clean the rod is reclaimed and sold to outside industries. The waste wire is collected, sorted and re-sold. And the zinc by-products from galvanizing are reclaimed and recycled. Maze makes nails ranging from 1/2 inch to 12 inches with smooth, ring, and spiral shanks. Most of these nails are available in either a double hot-dipped zinc-coated finish, or a painted finish. For more information and a free catalog, write Maze Nails, Dept. JLC, PO Box 449, Peru, IL 61345.

Bricks From Trash

Phoenix Scientific Industries makes pavers, face brick, fire brick, and drain tile from material that would otherwise be classified as hazardous waste. *Phoenix Brick* is made with "fly ash" that is scrubbed from the smokestacks of municipal solid waste incinerators. Fly ash is usually treated as hazardous waste because concentrated metals in the ash can leach out into ground water if left in ordinary landfills. In making the brick, the ash is mixed with clay and heated to about 2,000°F for several hours. At this temperature, many of the toxins in the ash are burned out. The remaining heavy metals are bound into the clay and ash as these materials melt into a unified ceramic, leaving no environmental impact. The process is being licensed to municipalities so the brick can be made available locally. For more information, contact Phoenix Scientific Industries, Suite B9, 3620 N. High St., Columbus, OH 43214; 614/267-0100. ■

Guest columnist Steve Loken is a builder in Missoula, Mont., and founder of the Center for Resourceful Building Technology, *an organization promoting resource-efficient building. The product selections in this article are adapted from the organization's directory of resource-efficient building materials, which is available for $15 from CRBT, PO Box 3413, Missoula, MT 59806.*