Shades of Green

What makes a product “green”? And how do you know if what you’re buying is truly green? Here are some useful definitions to help you sort through the green spectrum.

By Tyera Eulberg

From wood floors to windows to light switches, hundreds of home-building products call themselves “green.” This label is broad and idealistic, telling consumers that a product promotes the health and well-being of their family, the community and the environment. But how do green products actually accomplish that?

A few organizations have tried to further define green, asking that products meet a series of standards. For instance, products must be energy efficient, reusable, recycled, recyclable, biodegradable, nontoxic and animal friendly. But these requirements are very general—and often contradictory. To wit: a window made from recycled glass may be less energy efficient than one made new. So, ultimately, there’s no precise definition of green.

However, we searched around for a sensible guideline and liked the one created by Build It Green (www.builditgreen.org), a California nonprofit that promotes green building. Below, we boiled down their green definitions into six categories, with a green product example of each. But remember, truly green stuff usually meets more than one of these criteria.

Protects and Renews

Products can help save natural resources, such as old-growth forests, fresh water, and oil and mineral deposits, simply by using less material—though meeting this criterion is rarely enough by itself to earn a product a green label. Drywall clips that replace corner studs, for instance, could be considered green because they reduce the lumber used in a house. Similarly, exceptionally durable products are environmentally attractive because they need to be replaced less frequently and do not require extra material for maintenance.

Some green products conserve resources by virtue of being rapidly renewable. Cotton and jute, for instance, grow very quickly. While wood is ultimately renewable—a better option than petroleum material, which is not—many crops regenerate much faster than trees, including bamboo, cork and even wool, as sheep regenerate their coats faster than a forest regenerates trees.

For those products that have to be wood, home builders can protect old-growth forests by using certified lumber. The nonprofit Forest Stewardship Council (FSC) offers certification for timber products extracted from sustainable managed forests. This means that FSC wood is harvested in a way that maintains a forest’s biodiversity, productivity and regeneration, and is thus considered more renewable than other lumber.

An example of a new renewable green product is BioBased Insulation, a type of...
after

This park’s seedlings and soil (below) were protected by BioNet, a 100-percent biodegradable erosion blanket made of natural materials that allows vegetation to grow through it (right).

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spray-foam insulation. While traditional spray foam is petroleum-based, BioBased uses soybean oil, an annually renewable crop. In addition to being greener, soybean insulation is also less costly.

Reuses and Recycles
Recycled content is an important (and well-known) feature of many green products. But some recycled material is greener than others. Post-consumer recycled content (ordinary glass, paper and plastic) is environmentally preferable because the material is directly diverted from landfills. Less green is post-industrial recycled content, harvested from industrial byproducts and manufacturing waste.

While recycling rescues tons of waste from landfills each year, the material must be processed before it can be made into something new. So whenever you can reuse a product as is, you save natural resources and energy. Many salvage yards sell bricks, concrete, flagstones, framing lumber and other material saved from demolished buildings.

In Colorado, reclaimed wood from beetle-killed pine has developed into a busy trade. Triton Logging offers another twist on salvaged wood—the company harvests standing trees submerged for decades in reservoirs. Triton’s remote-controlled logging submarine, called a Sawfish, cuts each tree above the reservoir floor to preserve the bottom sediment and surrounding ecology.

A notable home product made with post-consumer recycled content is PaperStone. Just as its name implies, this hard, water- and stain-resistant surface is made from recycled paper and resin that can be shaped into custom countertops. While PaperStone has existed for several years, the new PaperStone Certified uses 100-percent post-consumer recycled content as well as purely water-based resin.

Says No to Toxic Chemicals
Products in this category include those with low manufacturing pollution. When wood is prepared for public use, for instance, it’s treated to prevent warp and rot. The conventional pressure treatment uses Chromated Copper Arsenate, a toxic pesticide that makes the wood difficult to dispose of environmentally. Green products, like TimberSIL wood, use a nontoxic mineralization process to treat wood, and some natural-wood vendors offer preservative-free wood that avoids toxic materials altogether.

This green category also includes products that reduce pollution from a completed home. Physical termite barriers reduce the need for pesticides, as do natural pest-control systems. Other systems prevent groundwater pollution.

Porous paving blocks, like E.P. Henry’s ECO Paver, allow rain and hose water to soak through pavement into the soil below, preventing runoff. This in turn reduces overflow and surface-water pollution. Another example is vegetated or sod roofs, where plants grow on special roof- ing soil. The material soaks up rain and prevents it from carrying toxic pollutants into lakes and streams.

Prevents Eco-Pollution
Some building products are considered green because they prevent pollution or other ecological damage while a house is being built or remodeled. There are very few products that meet this criterion, however, and most eliminate the need for excavation at a home’s foundation, or they prevent ground erosion.

Erosion-control blankets, for instance, cover bare, seeded soil to prevent the seedbed from washing away. After the vegetation grows, the blanket degrades, leaving only the plants. Traditional erosion blankets are made of photodegradable plastics that rely on the sun to disintegrate and often leave plastic residues. BioNet, manufactured by North American Green, is made of 100-percent biodegradable straw, coconut fiber and jute, and is secured with stakes made from corn. These materials, recycled from agricultural waste, leave no synthetic residues and even mulch the new plant growth.

Saves Water and Energy
Using natural resources daily to heat your house, light rooms and wash dishes often has a much greater environmental impact than the materials used in building your home. Thus, many products installed during construction receive a green label if they conserve energy and water after the house is complete.

Renewable-energy equipment, like solar panels and wind turbines, are considered green because they replace the use of fossil fuels. Other products might conserve energy by reducing the power spent on heating and cooling. Highly effective insulation might qualify as green under this criteria, and similarly, high-performance windows and glazing.

Electrical equipment, on the other hand, could qualify if it uses reduced energy in normal operation. For example, fluorescent light bulbs use about a third of the electricity required by incandescent lamps, while tankless water heaters and
sophisticated lighting controls make sure your home uses power only when needed.

Similarly, a last group of green products conserves water. Some fixtures, like low-volume toilets and low-flow shower heads, use less water per use. Others replace water by collecting rain that would normally be lost into the ground or street drains.

Introduced in 2006, the Aqus toilet-tank system actually recycles water before it’s piped out of your house. A tank collects used water from a bathroom drain, disinfects it and reuses it to flush the nearby toilet. Aqus equipment reduces metered water usage in a two-person household by about 10 to 20 gallons a day, or about 5,000 gallons a year. The system is compatible with both retrofits and newly built bathrooms. The drawback? You’ll lose some storage space under the sink.

Preserves Indoor Health

Buildings should be healthy to live in, so a last group of green products targets the indoor environment. Volatile Organic Compounds (VOCs) readily emit chemical vapors at room temperature that can aggravate allergies and asthma, and create additional health problems after continual exposure. VOCs are commonly found in paint, paint thinners, glues and sealants, so using low-VOC versions of these products protects your health.

Some green products avoid VOCs altogether. Henkel’s OSI Green Series of caulks and adhesives falls into this category. The line includes VOC-free products that contribute to better indoor health by improving air quality.

For information on more green home products, visit www.buildinggreen.com; for local Boulder green products, check out www.positive-energy.com. For information on hundreds of household products, visit the Environmental Protection Agency’s Database of Environmental Information for Products and Services at yosemite1.epa.gov/opptopptstand2.nsf.

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