

# Green Building Adhesives: A Primer

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The first official green home building program began in 1985 as a city-wide energy-efficiency initiative in Austin, TX. The Green Building Program was the country's first comprehensive program to encourage using sustainable building techniques in residential, commercial and municipal construction. The organization defines sustainability as meeting our present needs without compromising the needs of future generations, or, simply, green building.

This article addresses some frequently asked questions about green and green building.

## What Does "Green Building" Mean?

Green building is a worldwide movement to promote the use of environmentally friendly products and practices in de-construction, construction, remodeling, and repair. The goal is to match materials and activities to building design to minimize the overall environmental impact.

## What are VOCs? What makes a product VOC-compliant?

VOC is an acronym for volatile organic compound. These compounds react with atmospheric ozone, along with particulates, to form smog. Smog is thought to be a major contributor to air pollution and health problems, such as asthma.



In 1991, the U.S. EPA passed the Clean Air Act with the specific intention of lowering smog levels. One way to do this is to reduce the amount of VOCs available for release into the air. Therefore, parts of the country where smog is a greater problem have begun implementing regulations limiting the amount of VOC a product can contain. If a product's VOC level is below the limit set forth in the regulations, it is VOC-compliant.

## What Makes a Product "Green"?

Although the term “green” is subjective, most green products can be classified into one or more of the following categories.

- Products made with salvaged, recycled or agricultural waste content
- Products that conserve natural resources
- Products that avoid toxic or other emissions
- Products that save energy or water
- Products that contribute to a safe, healthy environment

### How Can I Tell if a Product is Green?

One key way to determine if a product is green is to note its VOC content. The lower the VOC level, the more environmentally friendly that product will be. Since solvents represent a large portion of the VOC category, it also means that the solvent level in the product will be lower; therefore, the product is likely to be safer for the environment. The amount of recycled content in either the product or the packaging ultimately helps conserve the environment, thus adding to a product’s eco-friendliness.

### What is a Green Adhesive

Product Category	VOC % by weight	VOC g/l
Construction joint & floor covering	10%	100g/l
Construction joint & floor covering (Cat. sets for 2005)	1%	10g/l
Carbide & concrete	1%	10g/l
General purpose adhesives	10%	100g/l
Contact cement (general purpose)	10%	100g/l
Contact cement (general purpose) (includes 1 gallon)	10%	100g/l
Contact cement (general purpose) (includes 1 gallon)	10%	100g/l

Key criteria for defining an adhesive as green include formulas that are green because of what is not in them (e.g., hazardous air pollutants and ozone depleters); products that are green because they reduce the environmental impact of building operation (e.g., the energy efficiency gained from the effective use of caulks and sealants); and products that contribute to a safe and healthy indoor environment (e.g., low VOCs or formaldehyde-free adhesives).

The table can be used as a benchmark for green adhesives for consumer products weighing less than 16 oz.

### What Are the Benefits of Going Green? Why Should I Use Green Products?

The use of green products offers many benefits to the builders, remodelers and/or owners of residential dwellings or commercial buildings: improved air quality, less depletion of natural resources, energy savings, potential tax

breaks, and the potential for fewer health problems.

## What Are the Differences in Green Rating Systems?

Several green building programs have sprung up in the United States, particularly on local and state levels. However, three national programs appear to be the most popular: the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, the National Association of Home Builders (NAHB) Green Building Guidelines, and the Green Building Initiative's Green Globes program.

LEED is a building rating system that requires the use of a consultant to help rate a building project for one of four levels of certification: Platinum, Gold, Silver or Certified. LEED offers programs in several areas of building — both commercial and residential. Rating systems and guidelines can be downloaded from [www.usgbc.org](http://www.usgbc.org).

The NAHB has also published a set of guidelines that builders, home building associations and project managers can use to apply green concepts to residential construction projects. The guidelines also work on a point-rated system (Gold, Silver and Bronze) and provide a voluntary and affordable option for the mainstream homebuilder. The NAHB's Model Green Home Building Guidelines can be downloaded at [www.nahb.org](http://www.nahb.org).

The Green Building Initiative (GBI), established by the NAHB, has adopted a popular Canadian Green Building program for commercial construction called Green Globes. This program is currently the only interactive, web-based green-building rating tool for conducting environmental assessments of a building project. It is gaining popularity in the residential arena as well.

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### SIDEBAR: Green Adhesives Line Introduced

The adhesives manufacturer that developed the first eco-friendly construction adhesive two decades ago has introduced a line of solvent-free adhesives for the construction industry. Franklin International's GREENchoice brand includes seven solvent-free adhesives and one eco-safe, polyurethane-based formula. The adhesives offer the same performance of solvent-based formulas without the odor or risks to construction crews or the environment.



Eight types of adhesives comprise the core GREENchoice line. Solvent-free adhesives include GREENchoice Heavy-Duty Construction, Projects & Repair,

