

# Wood Specification: Recycled Materials

## Terminology

### Recycled content:

the proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer material is considered as recycled content, as defined under ISO 14021 Environmental Labels and Declarations—Self-Declared Environmental Claims (Type II Environmental Labelling).

### Pre-consumer recycled material:

material diverted from the waste stream during a manufacturing process. Materials generated in a process and capable of being reclaimed within the same process (such as rework, regrind or scrap) are excluded.

### Post-consumer recycled material:

material generated by households or by commercial, industrial, or institutional facilities in their role as end users of a product that will no longer be used for its intended purpose.

### Assembly recycled content:

the recycled proportion of a material that is calculated by dividing the weight of the recycled content by the overall weight of the assembly.

## Resources

**Construction Specifications Institute, GreenFormat ([www.greenformat.com](http://www.greenformat.com)):** database of products containing recycled content.

**Scientific Certification Systems ([www.scscertified.com/gbc/recycledmaterials.php](http://www.scscertified.com/gbc/recycledmaterials.php)):** products made from pre-consumer or post-consumer material can qualify for recycled content certification.

**[www.naturallywood.com](http://www.naturallywood.com):** a portal to British Columbia wood products and services, including a database of local wood companies.

**[www.buildgreenwithwood.com](http://www.buildgreenwithwood.com):** a community for professionals to share innovations, connect with industry news, and find out more about building green with wood from sustainably managed forests.

Recycled content products are made from materials that would otherwise have been discarded either during the manufacturing process (pre-consumer) or at the end of service life (post-consumer). Specifying recycled content products plays an essential part in reducing the amount of waste that goes to landfills, the energy consumption and greenhouse gas emissions associated with new product manufacture, and the impacts of ecosystem degradation associated with resource extraction.

The use of wood products with recycled content is relatively straightforward. Products such as:

- particleboard
- oriented strand board
- parallel strand lumber

are cost effective, familiar to the trades, and can contribute a high proportion of recycled content to the overall calculations. Furniture is generally not included in calculating the percentage of recycled content.

## Why Recycled Materials Add Value

- Building products that include some or all recycled content reduce the need for virgin materials in new construction. Using recycled materials reduces the need to landfill these materials. It also reduces the environmental impacts associated with extracting and processing virgin materials.
- Buying recycled-content building products helps to ensure that materials collected in recycling programs will be used again in the manufacture of new products. Benefits of maximizing the recycled content in materials include the ability to:
  - › Demonstrate performance against corporate responsibility and sustainability policies without incurring a cost premium
  - › Reduce materials cost; e.g., where locally reprocessed demolition materials are cheaper than virgin materials
  - › Provide a competitive edge through differentiation
  - › Make reclamation and recycling more economic
  - › Satisfy the values held by clients and their employees
  - › Complement other aspects of sustainable design
- Green building rating systems award credits where a prescribed percentage of materials containing recycled content is used in a building's design.

## How to Include Products Containing Recycled Content in Design

- Many products with higher levels of recycled content are available from mainstream manufacturers—who subject the products to the usual tests—in high volumes, and at costs that are competitive with equivalent products containing less recycled material.
- It is important to set goals early in the design process and to document them in the specification documents as part of the project's overall green building goals. Set appropriate recycled content targets based on the project's budget and ensure related requirements are captured in the construction documents along with approved alternatives.
- Increasing the recycled content of building materials need not impact design nor restrict the choice of products. Simply select products containing higher levels of recycled material in place of products containing lower amounts.
- The use of life cycle assessment tools may prove helpful in the decision-making process because some materials with recycled content may require more frequent care and maintenance.
- Coordinate recycled material procurement with a construction waste management plan in order to make use of on-site salvaged deconstruction and demolition waste.

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## What to Ask Suppliers

- Material technical data must be acquired from suppliers, usually in the form of environmental information sheets and technical spec sheets that clearly spell out the proportion of recycled content in the total assembly of the product (based on weight). Recycled content percentages should be provided for post-consumer and pre-consumer content.
- Make sure that the supplier provides the manufacturer's contact information so that additional information can be obtained if required.
- 14021 Environmental Labels and Declarations—Self-Declared Environmental Claims (Type II Environmental Labelling) is the international standard used to verify recycled content in products. However, most Canadian manufacturers follow their own methodologies.



## Reclaimed Wood Products

Wood Anchor ([www.woodanchor.com](http://www.woodanchor.com)) out of Winnipeg, Manitoba reclaims wood including old timbers from prairie grain elevators, trees harvested due to disease (Dutch Elm Disease) or to clear land for development or farming, and as hardwood floors from home renovations.

Consideration is given through every step of the reclaiming process to ensure environmental sustainability. The majority of their wood is either locally sourced or trucked to their facility in large shipments to conserve fuel. The nails and other metals pulled from the lumber are recycled; wood scraps are used to heat their facility and wood chips from mouldings are sold for livestock bedding.

## Procedure

Where possible, take ownership of core tasks, including:

- Estimate, at key stages in the project, the potential baseline and good practice levels of recycled content for the project as a whole.
- Identify opportunities that might deliver "quick wins" in terms of offering higher recycled content, and determine how the project can meet the client's requirement.
- Negotiate and agree how the contractor will meet a request for good practice; e.g., agree on the actual levels of recycled content to be used, through discussions with contractors and project cost consultants.
- Prepare specifications that stipulate the requirements to be met by the contractor and trades.
- Advise the client about the documentation process and the need to check that the product complies with the project requirements.
- Establish and track information about the manufacturer, product cost (excluding labour and equipment), and proportion of pre-consumer and post-recycled content in the raw materials of each product.

### recycled content value (\$) =

$$(\% \text{ post-consumer recycled content } (\$) \times \text{ materials cost}) + (\% \text{ pre-consumer recycled content } (\$) \times \text{ materials cost})^*$$

\* = some rating systems may apply a factor for pre-consumer recycled content

