

## **GreenFormat, an Online Tool Providing Structure for Environmental Product Evaluation**

The green building movement in the US is driven by green/sustainable rating systems, emerging standards, and building codes that incorporate criteria for environmental consideration in product evaluation. These efforts are now incorporating LCA (Life Cycle Assessment) as a scientific approach to building products environmental assessment. LCA includes multiple-attribute reporting as opposed to single attribute reporting to help generate a more comprehensive product assessment while reducing market confusion and “greenwash”.

Although LCA is an accepted scientific approach to understanding product environmental impacts, it does not provide all of the information that should be considered in a product environmental assessment. The other consideration in LCA is known data uncertainties,<sup>1</sup> and weighing those uncertainties against economics, performance and compliance. Some of the complexities of environmental evaluation and specification of these attributes, labeling and product certifications need further clarity.

Design firms seeking greater clarification of sustainable product attributes have further complicated the situation because they do not have a standardized way to request or report information about products. Designers waste time individually developing product information questionnaires, and manufacturers waste time responding to individual firm questionnaires. These un-standardized interactions produce inconsistent and non-comparable information, which wastes still more time.

CSI (Construction Specifications Institute) observed this lack of consistency in the reporting of sustainable building product attributes and introduced GreenFormat ([www.greenformat.com](http://www.greenformat.com)) as a solution.

CSI is a national professional member society whose mission includes creating standards, formats and practice guidelines to improve construction documentation and project delivery. CSI’s suite of formats and standards include UniFormat, MasterFormat, PageFormat, and SectionFormat, all of which work together to provide structure for organizing, communicating and managing project information in a complex and fragmented industry.

GreenFormat is CSI’s response to the confusion of what constitutes a sustainable (or “green”) building product. It assists in the evaluation, specification and purchase of sustainable building products.

### **Structured information to support sustainable design and product selection.**

GreenFormat is a web-based tool that allows design professionals to identify the sustainable properties of products. GreenFormat offers several search paths to access a

product's green attributes, as well as the manufacturer's sustainable initiatives, such as LCA, and end-of-life and climate-change reporting.

GreenFormat is accessible at [www.greenformat.com](http://www.greenformat.com). It works with CSI's flagship standard, MasterFormat, and can be applied to all construction products. CSI will release the next version in time for GreenBuild in Phoenix this November.

GreenFormat groups sustainable information into five broad categories. These categories are then divided into sub-categories, which contain topics and questions concerning sustainability. The categories are:

1. **Background Information** – General fields used to categorize the information by MasterFormat number, manufacturer name, product name or trade name (with a manufacturer's brief description of the product), and the date the information is provided.
2. **Product Details** - This section addresses the four different methods of specifying -- reference standard, performance, descriptive and proprietary -- by capturing explicit information on compliance with standards and certifications, product performance and product composition.
3. **Product Lifecycle** - Describes the additional phases of a construction material's life cycle -- Extraction and Transportation; Manufacturing; Construction; Operations; and Deconstruction/Recycling -- that a design professional evaluates when selecting a sustainable product. It is not an attempt to collect all the information necessary to perform a product's LCA. It does categorize the most important and most commonly asked sustainability questions that relate to a product's lifespan. These are generally recognized categories used by the sustainability community.
4. **Additional Information** – Allows manufacturers to provide any additional information about their company's environmental policy or programs, other environmental groups that also list their products, etc. This category relates to the transparency of the information provided.
5. **Authorization** – Self-declaration by an official agent of the company that the information provided by the manufacturer is true and correct and has the company's official endorsement behind it.

GreenFormat's structure is flexible because change is anticipated as the sustainable building movement matures. New topics and questions will be added over time, and existing topics and questions that become obsolete will change or be dropped. GreenFormat is intended to be a living reference with ongoing updates as the industry requires.

GreenFormat allows manufacturers to accurately report the sustainability-measuring properties of their products, and provides designers, constructors and building operators with basic information to help meet green requirements. The advantage of CSI's GreenFormat over a designer's custom questionnaire is that it references specific industry standards wherever possible while providing for individual manufacturer input. The verification of sustainable claims by relating questions to standards and certifications

benefits both manufacturers and designers. For manufacturers who are faced with a flood of sustainable questionnaires, the direct link between question and verification gives them a clear understanding of the intent of the questions. For designers, having that substantiation and verification means less concern about wading through potential greenwash and misleading information. CSI is also aligning with independent third-party verification of the reporting when required.

Today, GreenFormat users can search by keywords, MasterFormat numbers, and product names, among other options. In the future, product attributes, such as recycled content, and other properties will be searchable. The data reported by manufacturers now addresses product compliance with various standards, rating system credits, certification and labeling programs. Eventually, referenced standards and programs will be linked to websites to help the user understand how to consider the reported information in conjunction with established criteria for sustainable design.

GreenFormat is a self-reporting system for product information and embraces the principles of ISO 14021 guidelines as the basis of responsible data reporting. The scope of ISO-14021, Environmental Labels and Declarations - self-declared environmental claims (Type II environmental labeling) includes specific requirements for self-declared environmental claims, including statements, symbols and graphics regarding products. This is explained to users through linked information.

GreenFormat also applies the principles of ASTM E2129 – Standard Practice for Data Collection for Sustainability Assessment of Building Products. GreenFormat is not a green building product certification or third-party assessment or rating tool. It is presented as a format to consistently report sustainable product information. This information can be considered by a user for specification or purchase of a product.

### **Summary**

The critical issue for specifiers and design professionals is to understand the reported environmental data for building products including single attributes, labels, certifications, and LCA. This involves understanding trade-offs that are affected when specifying environmental labels instead of environmental performance requirements in relationship to product performance and compliance. Products are selected based on many factors, beginning with meeting design intent and including economic, performance and compliance requirements as well as environmental considerations. The evaluation and assessment of products must be a whole-product balanced perspective.

GreenFormat as an online template for manufacturers to consistently and responsibly report building product environmental impacts along with performance requirements in order for balanced product evaluation and specification by the design team.

Additional GreenFormat information as well as upcoming free webinars can be found at [www.greenformat.com](http://www.greenformat.com) or by sending your questions and comments to [greenformat@csinet.org](mailto:greenformat@csinet.org)

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<sup>i</sup> [http://www.athenasmi.org/publications/docs/UncertaintyAnalysis\\_in\\_LCA.pdf](http://www.athenasmi.org/publications/docs/UncertaintyAnalysis_in_LCA.pdf)

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