



Materials Transparency: The Movement Continues to Gain Traction

Materials transparency has quickly become a recognizable term in our industry. The initiative is being driven by building owners/developers, design firms, and associations, based on their corporate or institutional philosophies of sustainable principles and increasing concerns about the ecological and health impacts of products and building materials. Simply put, materials transparency requires manufacturers to disclose the material content of building products with the goal of creating a more sustainable and healthful indoor environment. To meet this beneficial goal, additional information is required in the specification of materials and systems, as well as in the reports of material content by suppliers throughout the construction submittal process.

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New trends, like this one, can often translate into risk management impacts for the design and building industry. Design professionals should manage the expectations of the owner and clearly acknowledge that materials and health analyses are solely based on information furnished by manufacturers and

suppliers. If the Owner requires further assurances, they should be provided by a toxicologist, environmental hygienist, or other trained professional, retained directly by the Owner.

Better and more informed decisions regarding product selections can now be made because it is becoming standard practice for information that was once considered as “trade secret” to be provided by the manufacturer.

Standard formats like Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs) are (currently) voluntary open standards that help to maximize disclosure and accuracy of building product data.

Environmental Product Declarations®

EPDs are independently verified and registered documents that communicate transparent and comparable information about the life-cycle environmental impact of products. All EPDs registered in the International EPD® System are publically available and free to download through their website, listed at the end of this narrative.

Health Product Declarations

HPDs are being comprehensively captured through the HPD Open Standard®, a voluntary, stakeholder consensus standard, which is now the leading industry standard for reporting building product content and associated health information. It is incorporated as a reporting tool in certification programs, such as LEED v4 and WELL, and is also the foundation for industry harmonization efforts to establish a single method that can simplify and improve reporting about building products and health.

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Design professionals can use both of these resources to help make decisions on product selection, and builders can use them to demonstrate compliance with environmental and health requirements. A multitude of informational resources has been created to assist with identifying and sourcing the detailed information required by EPDs and HPDs. The resource list at the end of this narrative is a good place to start.



There are three predominant sustainability certification organizations that are evaluating materials and their ingredients. The U.S. Green Building Council's LEED Rating System is the oldest and most widely known. It is now joined by the International Living Future Institute which, through the Living Building Challenge Standard, is currently the most rigorous performance standard for buildings. It emphasizes a "regenerative design framework to create spaces that give more than they take." The third major organization dealing with materials transparency is the International WELL Building Institute, through its WELL Building Standard. This standard focuses on improving human health and well-being in buildings and communities.

USGBC LEED v.4

USGBC increased the Material and Resources credit category in its current version of LEED by adding three credits that deal directly with materials transparency. These new credits deal with 1) EPDs, 2) sourcing of raw materials (extraction or manufacture), and 3) materials ingredients (chemical makeup). The design and building team can use a tool called the Building Product Disclosure and Optimization Calculator to keep track of product details. It is available at <https://www.usgbc.org/resources/bpdo-calculator>.

Living Building Challenge Standard

The Living Building Challenge (LBC) is organized into seven performance areas, called Petals, as they seek to imagine a building that is as efficient as a flower. The intent of the Materials Petal is to help create a materials economy that is non-toxic, ecologically restorative, transparent, and socially equitable. The LBC created the Declare Label to assist with material composition assessment. It is a transparency platform and product database that addresses where a product is from, what it is made of, and where it goes at the end of its life. They have also created a Red List of toxic materials that are worst in class and prevalent in the building industry. An LBC project cannot contain any Red List materials or chemicals. This document is used for tracking purposes. <https://living-future.org/wp-content/uploads/2016/11/Living-Building-Challenge-3.0-Materials-Tracking-Table.xlsx>

WELL Building Standard

This standard focuses on potential hazards to the environment and to human health. The Material Transparency Intent requires that at least 50% (as measured by cost) of interior finishes and finish materials, furnishings (including workstations), and built-in furniture have some combination of either a Declare Label, a Health Product Declaration, or any method accepted in USGBC's LEED v4 MR credit. Letters of Assurance are provided by each of the design disciplines, the owner and the contractor. Templates can be found at <http://standard.wellcertified.com/certification-process>.

While product selection is the design professional's job, it is critical for the Owner and the Builder to understand this industry-wide initiative and accept the evolving responsibilities to utilize appropriate materials and products to attain the sustainability goals of the project. New resources and standards are becoming more available and making achievement of those goals less complicated.

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Resource Guide

Product Sources

UL Spot (LEED v4, Greenguard Gold, EPDs, Recycled Content)
<https://spot.ulprospector.com/en/na/BuiltEnvironment>

SCS Global Services Certified Green Products Guide (Recycled Content, EPDs, FloorScore, Indoor Advantage Gold)
<https://www.scsglobalservices.com/certified-green-products-guide>

The International EPD System® (EPDs)
http://environdec.com/Epd-Search/?search_type=simple&Category=7764

The C2C Certified Products Registry
<http://www.c2ccertified.org/products/registry>

HPD Public Repository (HPDs)
<https://www.hpd-collaborative.org/hpd-public-repository/>

Declare Database (Declare)
<https://living-future.org/declare/>

The Pharos Project (Product Database)
<https://www.healthybuilding.net/content/pharos-v3>

Program Operator Consortium
<http://www.transparencycatalog.com/>

NSF Products and Service listing
<http://info.nsf.org/Certified/Sustain/listings.asp?ProdCat=EPD>

ASTM International EPDs (EPDs)
<https://www.astm.org/CERTIFICATION/EpdAndPCRs.html>

Air Resources Board (ULEF, NAF)
<https://ww2.arb.ca.gov/resources/documents/nafulf-provisions>

Giga Base.org (Multiple attributes)
<https://origin.build/#/>

Rainforest Alliance (FSC)
<https://www.rainforest-alliance.org/find-certified>

Nature Economy and People Connected (NEPCon)
<https://www.nepcon.org/sourcinghub>

Organizations

Mindful Materials
<http://www.mindfulmaterials.com/>

Health Product Declaration Collaborative
<http://www.hpdcollaborative.org/>

Cradle to Cradle
<http://www.c2ccertified.org/>

Greenscreen
<https://www.greenscreenchemicals.org/learn/full-greenscreen-method>

Greenguard
<http://greenguard.org/en/index.aspx>

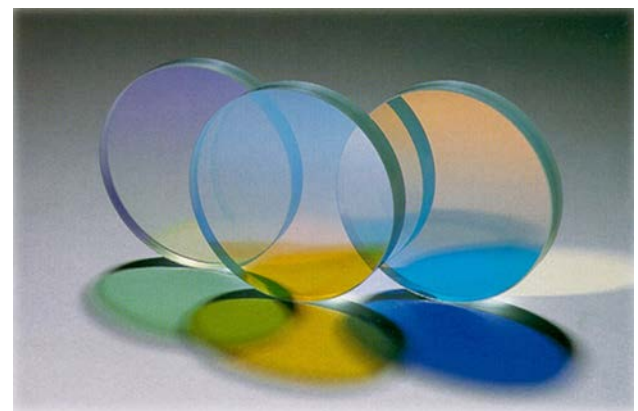
SCS Global Services
<https://www.scsglobalservices.com/>

Program Operator Consortium
<http://programoperators.org/>

International Living Futures Institute
<https://living-future.org/declare/declare-about/red-list/>

International Well Building Institute
<https://www.wellcertified.com/>

U.S. Green Building Council
<https://www.usgbc.org>



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Berkley Design Professional (Berkley DP) was created in 2013, by a team of insurance professionals with a passion for the design industry and deep roots in Architects and Engineers Professional Liability underwriting, risk management and claims management. The genesis of Berkley DP was the combination of our team's commitment to bring fresh ideas to the products and services design professionals need together with the resources of W. R. Berkley Corporation. Berkley DP's motto is: Better By Design®. By this we mean that our policyholders can become better businesses by leveraging our innovative risk management solutions, fair and experienced claims services and comprehensive architects and engineers professional liability coverage.

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