

TRANSFORM GRANT RESEARCH PROJECT

Title: Materials Research Collaborative

Research Team: Healthy Building Network, Building Green

Institution: Healthy Building Network, Building Green

AMERICAN
SOCIETY OF
INTERIOR
DESIGNERS



FOUNDATION

EXECUTIVE SUMMARY

PURPOSE OF STUDY

The purpose of this project was to:

1. enable the interior design community to more proactively participate in reducing the use of building products that are hazardous to human health; and
2. provide interior designers with an improved level of independently-verified information they can use to avoid specifying materials that are hazardous to human health, and to stimulate market demand for healthier building products.

RESEARCH SUMMARY

The work of the *Materials Research Collaborative* provides practical information and guidance on interior finish products for designers to easily navigate through the confusion that is rampant among contemporary building product certifications, and help them to discriminate between truly healthier materials and greenwash marketing claims.

Research priorities were identified from surveying interior designers' needs, and products were evaluated according to the Pharos Framework. Through research on product categories and ingredients, the Pharos Building Product Library houses evaluations of numerous interior finish products.

IMPLICATION HIGHLIGHTS

- Resource for interior designers to specify healthier materials that will not only reduce human exposures to highly toxic chemicals, but also provide important incentives for product manufacturers to design healthier products.
- Guidance for interior designers to understand the impact of materials on humans, the process of evaluating healthy products and ingredients, and how to approach vendors and manufacturers in specifying healthy materials.

MATERIALS RESEARCH COLLABORATIVE

BACKGROUND

Chemicals released from interior finish products into the built environment can have profound impacts on human behavior ranging from reduced comfort and productivity for building occupants, to long-term genetic damage that can affect future generations. Interior designers have had to rely upon a patchwork of green product certifications and LEED credits to guide their efforts to create healthy interior environments. Unfortunately, these tools have proven to be inadequate and frustrating for designers who are bombarded with a growing array of virtually

unregulated product claims, certifications, green marketing, and greenwash.

The purpose of the Collaborative is to perform the independent, foundational research and product evaluations required to provide building products specifiers with unbiased, up-to-date information about chemical hazards, practical product evaluations and comparisons, and recommendations about the healthfulness of widely-used building products.

This information will be presented for use via the Pharos online database and analysis system, a project of HBN which, in the first year of its public launch in November 2009, has established itself as the industry

leader in transparent access to chemical and material properties of building products. The Collaborative's goal is to significantly accelerate the pace of independent research into a wide range of building products, so that Pharos can provide a comprehensive solution for building products specifiers, especially for documenting the serious, long-term health impacts from chemicals that are now ubiquitous in flooring and carpet, wall coverings, upholstery, and furniture.

METHODOLOGY

From February 2011 to January 2013, the Materials Research Collaborative used the following methods to evaluate product categories:

- Determine a list of typical product ingredients and categories that would be most helpful to interior designers through surveys
- Research ingredients by product category
- Research common “building block” ingredients (i.e. chemicals and materials that are key elements in several product categories)
- Evaluate products using the Pharos Framework of five active categories
 - **Volatile Organic Compounds** (VOCs health impacts on occupants from exposure);
 - **IAQ & other Toxic User Exposure;**
 - **Manufacturing and Community Toxics** (identified manufacturing chemical hazards for workers and surrounding communities);
 - **Renewable Materials** (recycled and bio-based content used in the product); and

- **Renewable Energy** (used in manufacturing facilities where the product is made and in the supply chain).

- Develop knowledge seminars on product ingredient research based on the needs of interior designers
- Evaluate the value of this project according to interior designer needs

KEY FEATURES

New interior finish product categories were added to the Pharos Building Product Library through the funding of the *Materials Research Collaborative*:

- Decorative Laminates
- Flooring Adhesives
- Wood Flooring
- Wood Flooring Finishes
- Solid Surface Countertops
- Solid Wood Flooring
- Engineered Wood/Bamboo Flooring
- Specialty Paints
- Oriented Strand Board (OSB)
- Plywood

RESEARCH TEAM BIO

This research was a collaborative effort of HBN's research staff, directed by **Bill Walsh**, HBN's founder and executive director, and Building Green's research staff, led by **Jennifer Atlee**, research director.