NH&RA Asset Management Conference

Affordable Healthy Housing - Living in a Material World

William Weber

- Linoleum
- Solid Wood Floors (pre-finished)
- Engineered Wood Floors (pre-finished)
- Ceramic Tiles (made in the USA/lead-free with no CRT content)
- Solid Wood Floors (finished on site)
- Biobased Floors
- Rubber or Rubber/Cork Floors (made without crumb rubber)
- Laminate
- Carpet (with no fly ash, no vinyl or polyurethane backing, and no PFAS)
- Engineered Wood Floors (finished on site)

Images: CCH/Mithun, Liberty Bank Building; HBN; MSR, Rose

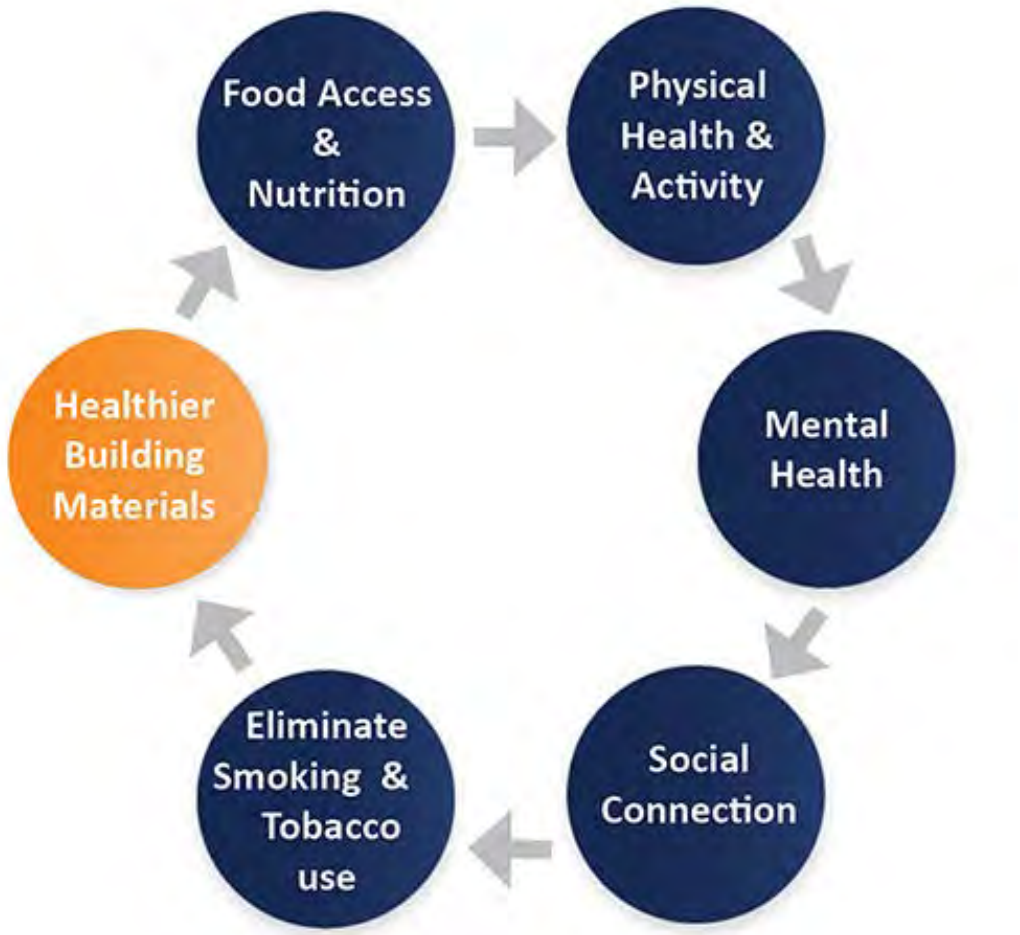
HomeFree

A national initiative supporting affordable housing leaders who are improving human health by using less toxic building materials.

homefree.healthybuilding.net

HEALTHY BUILDING NETWORK

Health and Equity

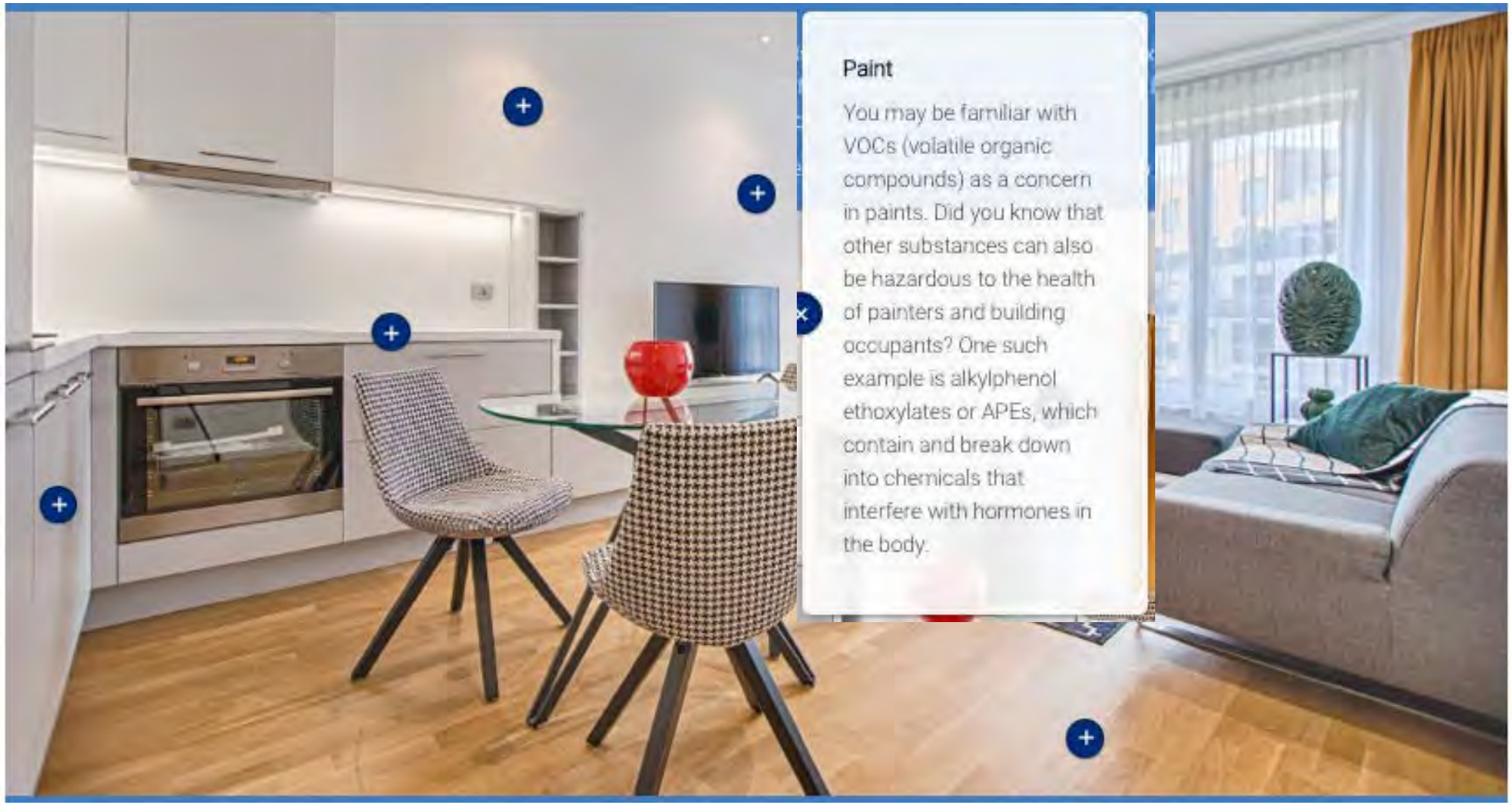


HEALTHY BUILDING NETWORK

Hidden Toxins in the Home

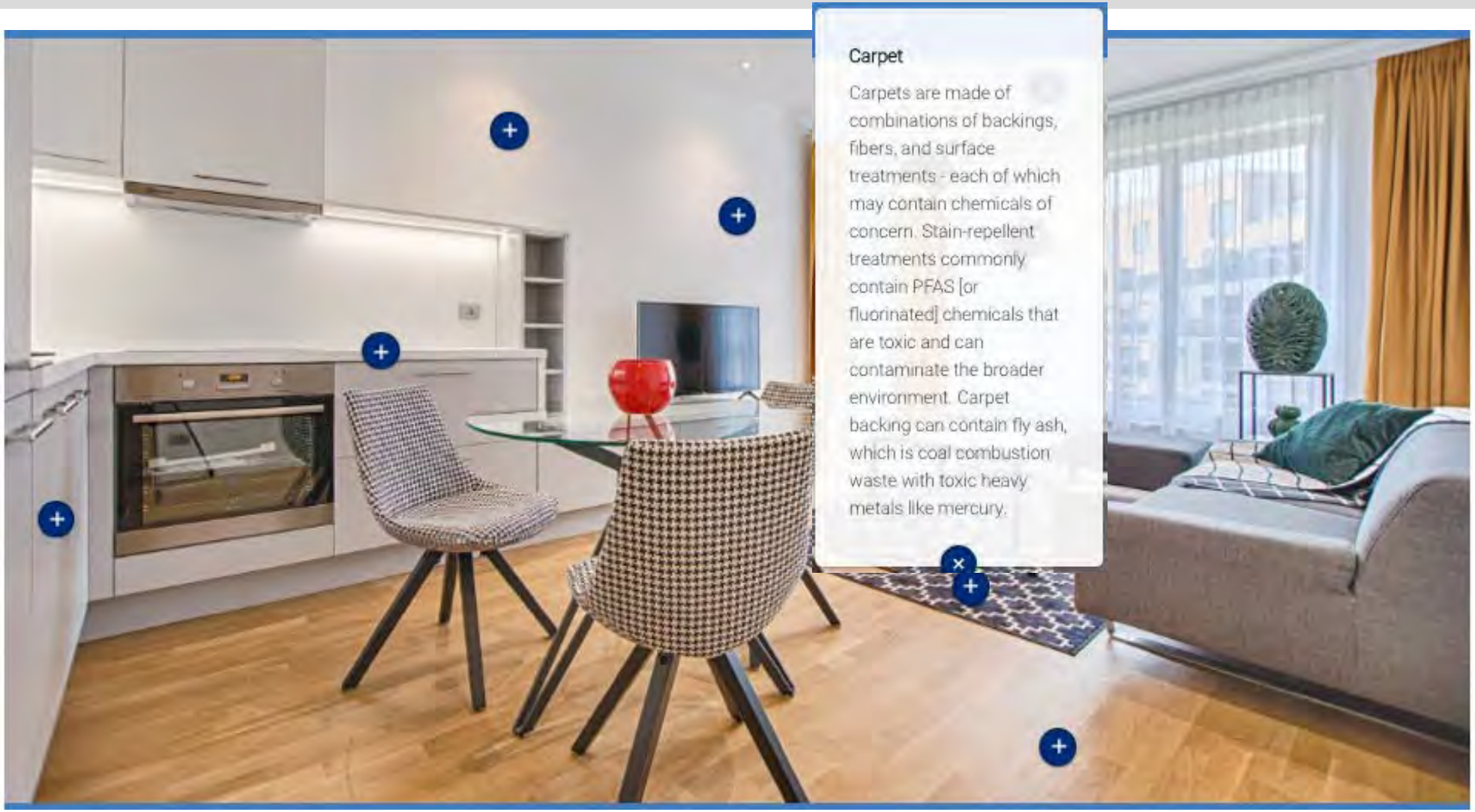
HEALTHY BUILDING NETWORK

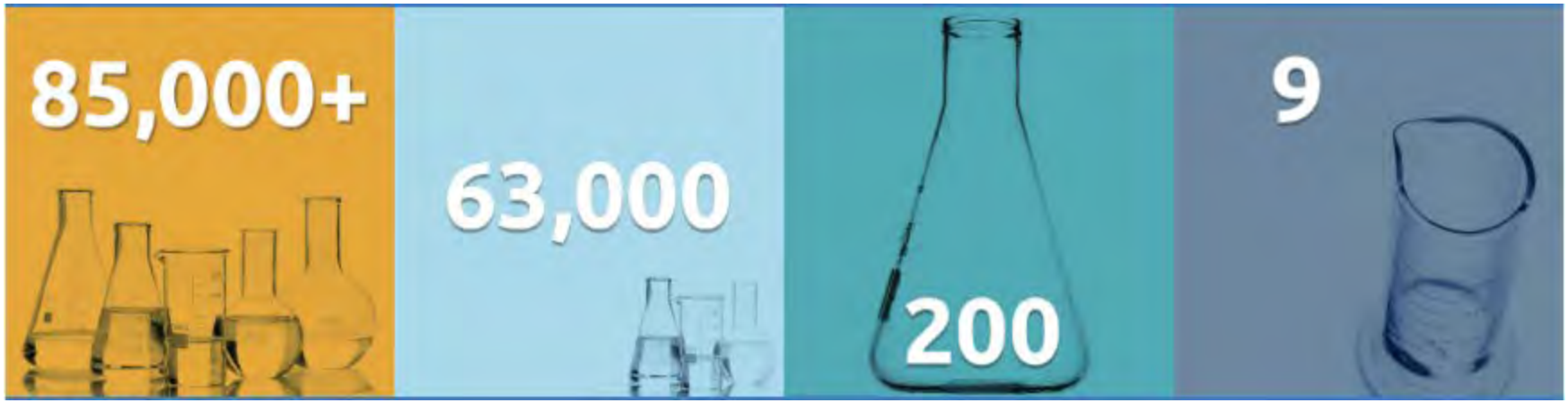
Hidden Toxins in the Home



HEALTHY BUILDING NETWORK

Hidden Toxins in the Home





Toxic Substance Control Act

HEALTHY BUILDING NETWORK

Exposure Pathways

INGESTION | INHALATION| DERMAL

HEALTHY BUILDING NETWORK

Chemical Hazards & Health Endpoints

Persistent and Bioaccumulative Toxicants (PBT)

Carcinogens and Mutagens

Developmental & Reproductive Toxicants and Endocrine Disruption

Asthmagens

Ozone Depletion Potential (ODP)

Global Warming Potential (GWP)

The Importance of Transparency!

1. Right to know
2. Need to identify priorities
3. Innovation
4. Accelerates change

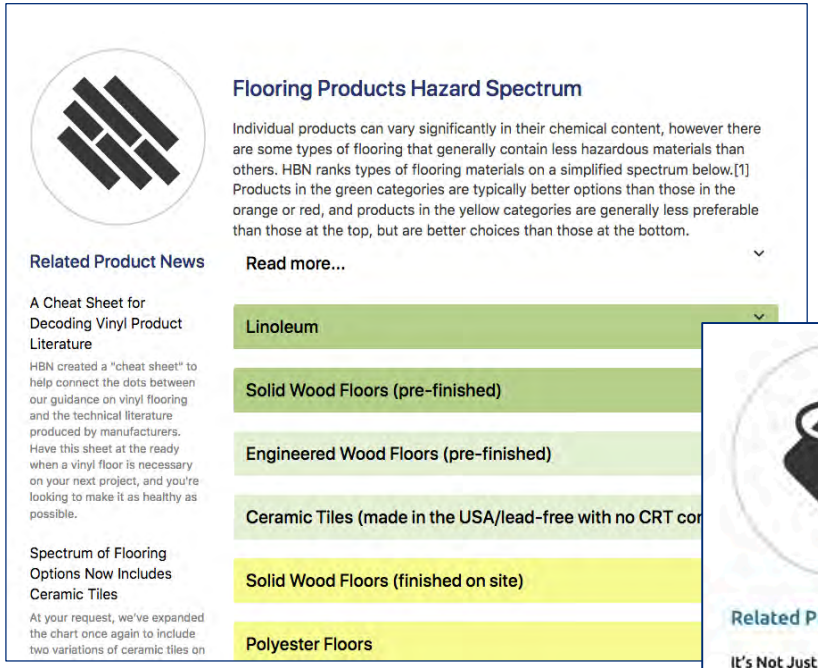
Action:

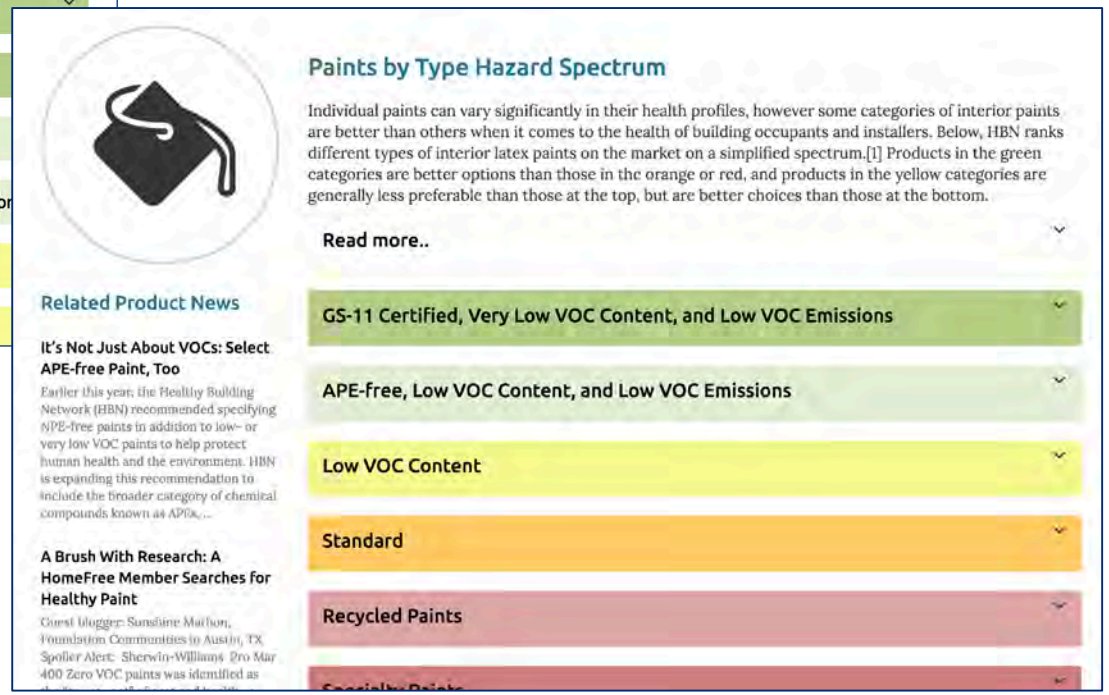
Prefer products with HPD and include HPDs as a requirement in specifications

HEALTHY BUILDING NETWORK

HomeFree

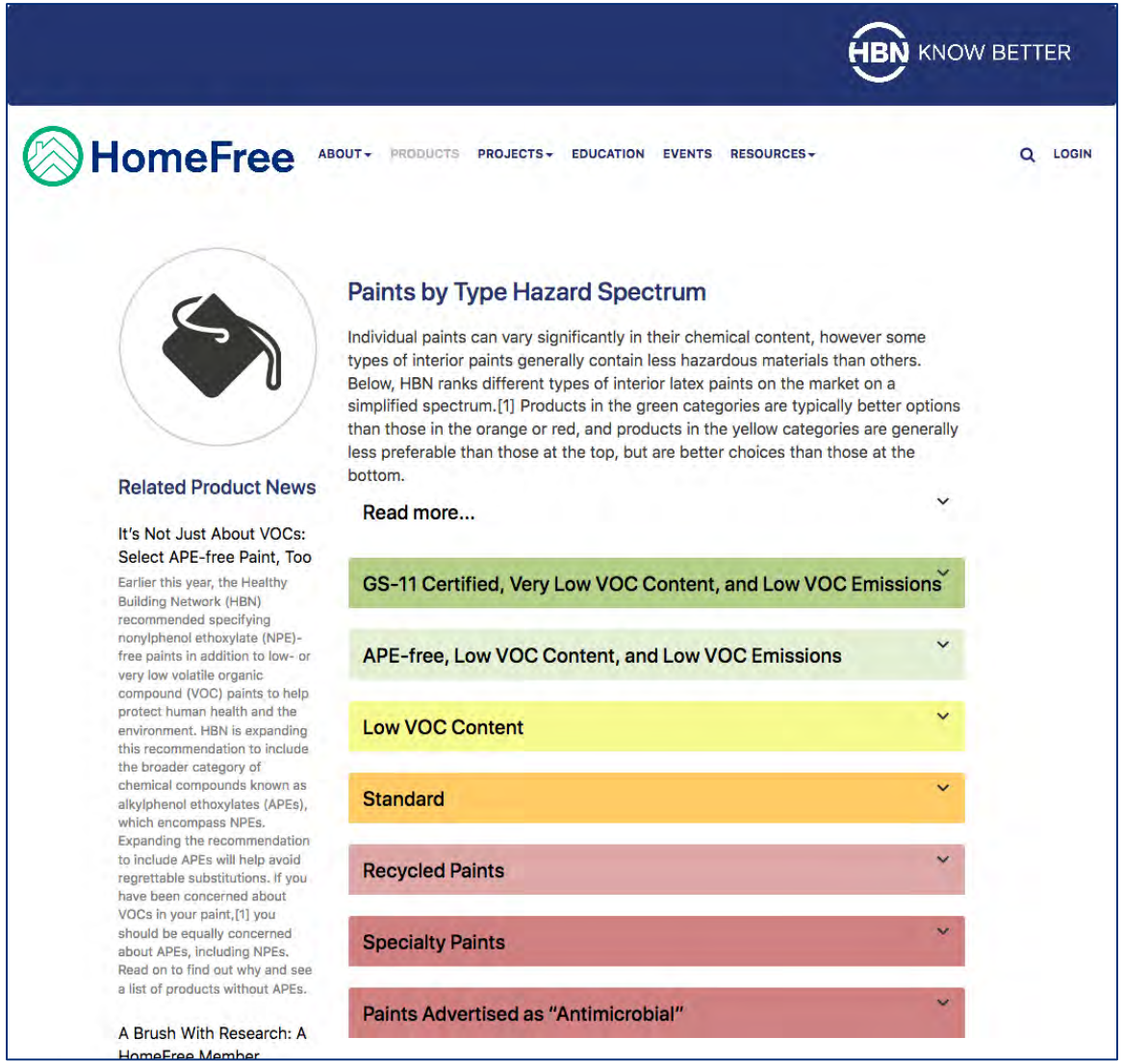
PRODUCTS CATEGORIES





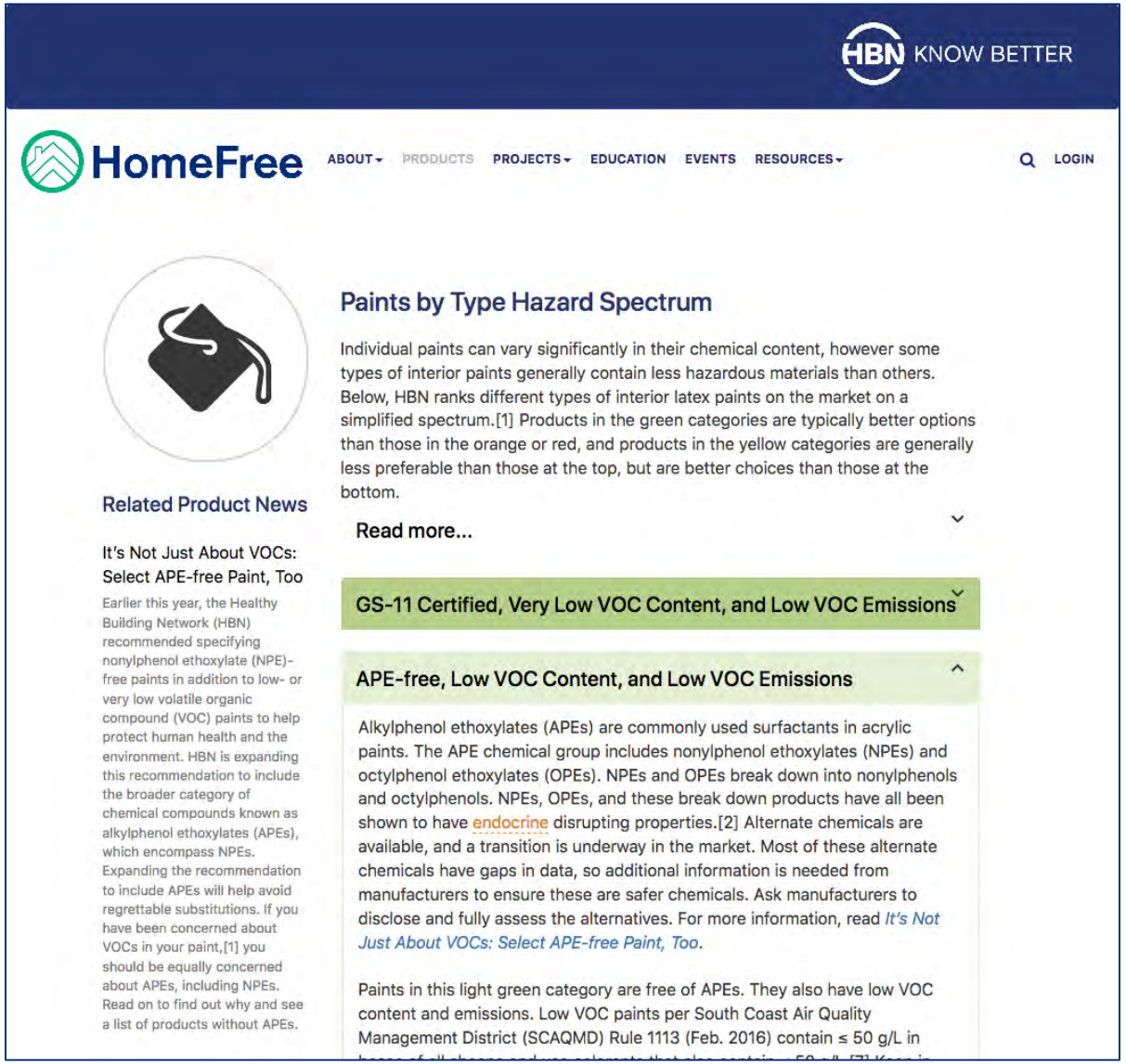
HEALTHY BUILDING NETWORK

Products - Paint



HEALTHY BUILDING NETWORK

Vetting Products



HEALTHY BUILDING NETWORK

Step by Step 4 - VOC Emissions

Step 4

0:00 / 0:13

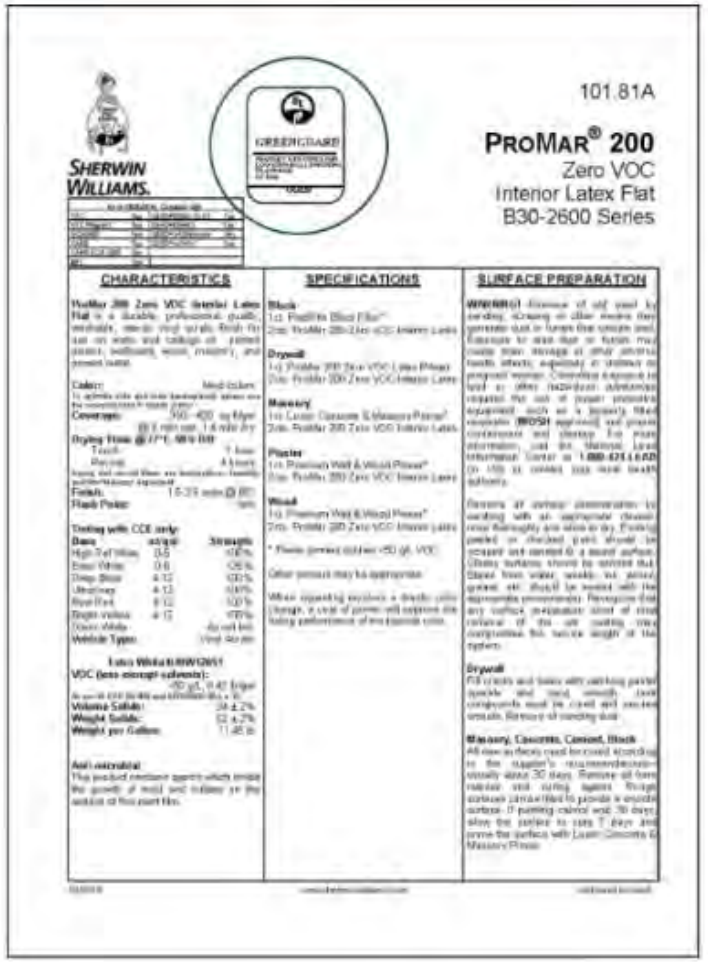
The top two tiers in the hazard spectrum, the green and light green, include a low VOC emission requirement.

Look for evidence that the product has low VOC emissions per the CDPH standard by checking for one of these certifications:

- UL GreenGuard Gold
- SCS Indoor Advantage Gold
- Berkeley Analytical ClearChem
- Master Painters Institute (MPI) X-Green
- GreenWise Gold

Some Sherwin Williams products, like ProMar Ceiling paint, shows the GreenGuard Gold logo on the product data sheet (right), which indicates that this product is certified to meet these requirements.

You can refer to the VOC content and emissions program summary noted in the previous step here to check for emissions certification options.



SHERWIN WILLIAMS.

101.81A

PROMAR® 200
Zero VOC
Interior Latex Flat
B30-2600 Series

CHARACTERISTICS | SPECIFICATIONS | SURFACE PREPARATION

Step by Step 4 - VOC Emissions

Step 4

The data sheet for SuperPaint does not list any of these certifications. Since it isn't listed on the product literature, it is likely that the paint doesn't have an emission certification, but we can verify this by checking the certification websites directly. By reviewing the certification websites, HBN verified that SuperPaint does not have a VOC emission certification.

Since there is no emission testing for the SuperPaint product, the highest category it can be part of is the yellow, for low VOC paints.

Attribute Tracking

Paint Name	GS-11	APE-free	VOC Content	VOC Emissions	Antimicrobial Health Claim
Sherwin Williams SuperPaint	No	Yes	≤ 50 g/L	No certification	


101.02A

SUPERPAINT®
Interior Latex
Flat

CHARACTERISTICS

SPECIFICATIONS

SURFACE PREPARATION

HEALTHY BUILDING NETWORK

Step by Step 4 - Summary

Navigate the lesson using the circled numbers, 1 though 10, at the bottom of the screen. Advance to the next section using the next module button after you have reviewed all the material.

Review and Summary

The final review reveals that the SuperPaint overall falls into the yellow category, since it doesn't meet all the requirements for the light green category due to the lack of VOC emission certification. Given the fact that it is APE-free however, it is a preferable option to others in the yellow category with similar VOC content.

Attribute Tracking					
Paint Name	GS-11	APE-free	VOC Content	VOC Emissions	Antimicrobial Health Claim
Sherwin Williams SuperPaint	No	Yes	≤ 50 g/L	No certification	No antimicrobial health claims

That brings us to the end of the process.

If you are considering a wide array of paints, it may be a good idea to work directly with the manufacturer or with your local product representative. While it is relatively easy to vet a single paint, checking the information for 10 or 15 can be time-consuming. A template email is included in the Resources section of this course.

1 2 3 4 5 6 7 8 9 10

HEALTHY BUILDING NETWORK

Case Study

CASE STUDY

Homes on Johnsons Pond

HOMES ON JOHNSONS POND, NON-PROFIT SENIOR HOUSING, SALISBURY, MARYLAND

PRODUCT CATEGORIES

PAINT

SHERWIN-WILLIAMS PROMAR ZERO VOC

COUNTERTOPS

SUBSTRATE ARE NAUF

CABINETRY & MILLWORK

SMART CABINETS; NAUF

INSULATION

KNAUS RESIDENTIAL FIBER-GLASS BATT INSULATION / FORMALDEHYDE FREE

DRYWALL

SELECTED PRODUCT WITH LESS SYNTHETIC GYPSUM

homefree.healthybuilding.net

Homes on Johnsons Pond, located in Salisbury, MD, is an affordable housing community comprised of two three-story buildings with a total of 63 units. The buildings are a mix of one-, two-, and three-bedroom apartments and resident amenities, including fitness room, playground, and library. Sustainability elements were based on project's pursuit of the National Green Building Standard (NGBS) certification.

When the partnership between Homes for America and Healthy Building Network's (HBN) HomeFree program began, the specifications for the Homes on Johnsons Pond were already written.

Seeking to make the most of the opportunity, the Homes on Johnsons Pond project team of Harkins Builders and Architecture by Design choose to focus their exploration of healthier materials on paint and flooring. The intent was to be ready with options should contingency funds become available during construction allow upgrades to healthier materials.

PAINT

Working in tandem with the HBN research team, the development team assessed paint options utilizing the HomeFree hazard spectrum while considering cost and performance. the project's National Green Building Standard NGBS certification. The National Green Building Standard (NGBS) is a third-party certification ANSI standard.

HomeFree

Homes for America (non-profit)
New Construction, 3 Story, 63 Unit

Sustainability Requirements
National Green Building Standard

Used –
Sherwin-Williams
ProMar Zero VOC

Additional cost –
$2,600

Changing Practice –
Now standard for all 5,600 units.

PAINT

Specification Recommendations

Prefer paints that meet the Green Seal-11 (GS-11) standard from 2010 or later whenever possible or specify paints known to be free of alkylphenol ethoxylates (APEs).

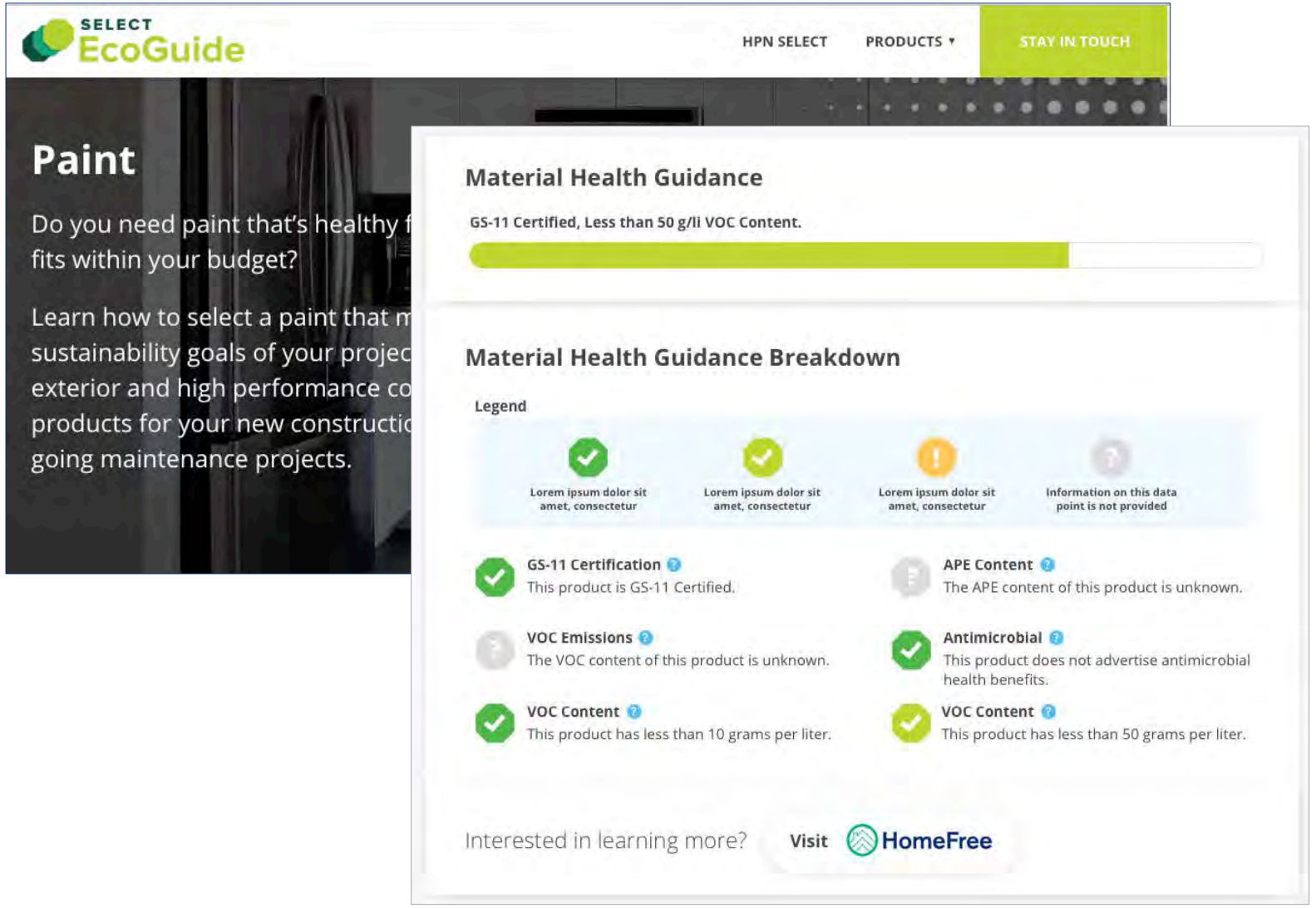
Specify bases with 10 g/L of VOCs or less and colorants that do not increase the overall VOC content.

At a minimum, specify paint bases and colorants with a VOC content of 50g/L or less.

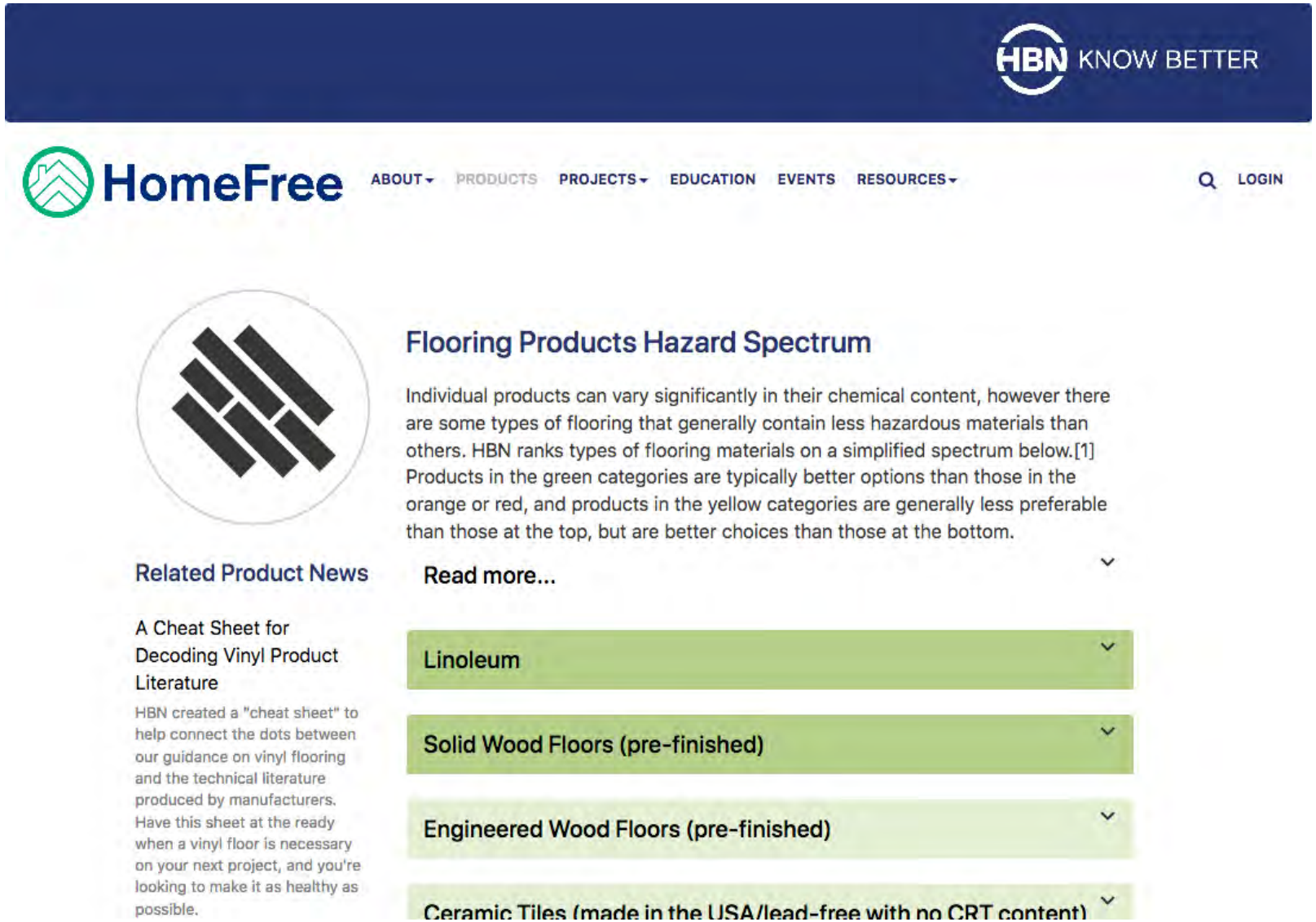
Look for paints that have VOC emission testing and meet the requirements of the CDPH (California Department of Public Health) Standard Method for Testing VOC Emissions (01350).

HEALTHY BUILDING NETWORK

HPN Partnership - EcoGuide

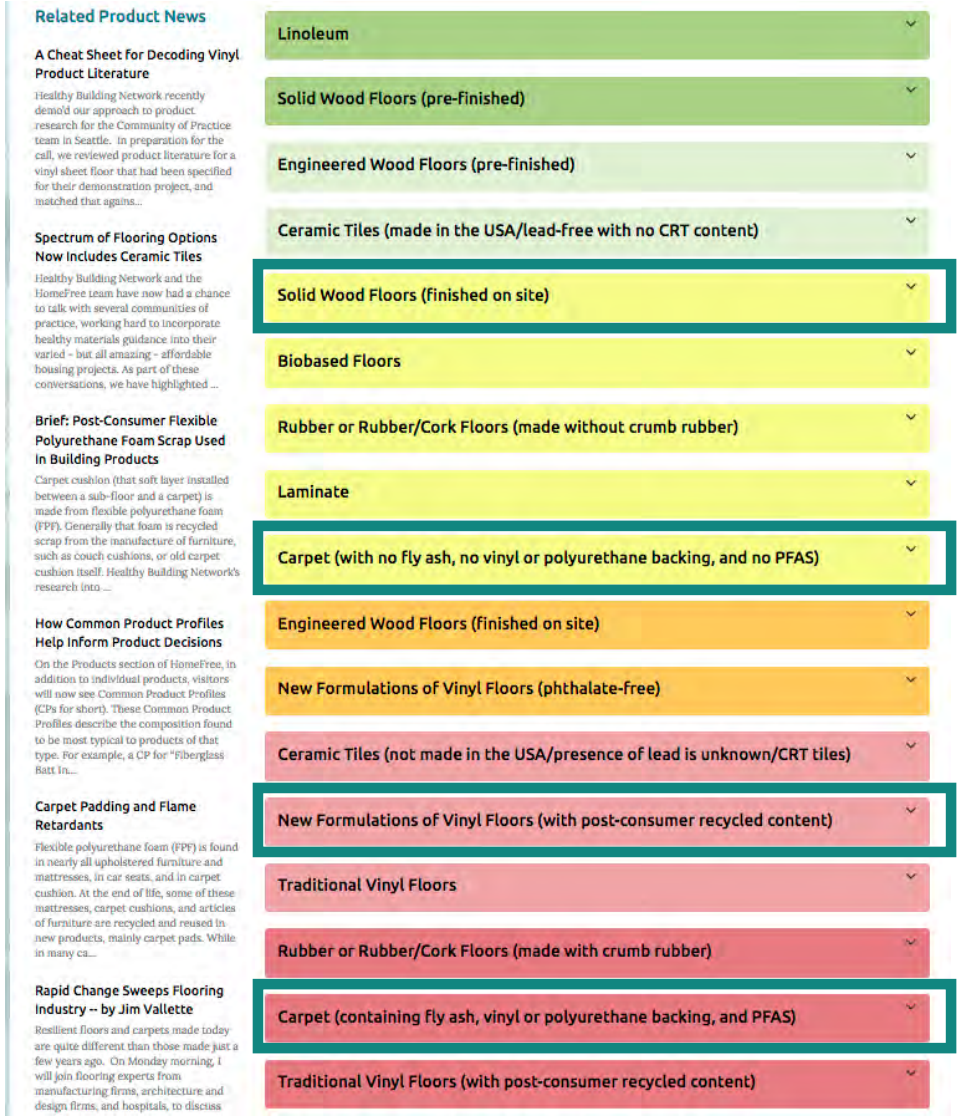


Products - Flooring



HEALTHY BUILDING NETWORK

Products - Flooring



Flooring Products Hazard Spectrum

Carpet → No vinyl or polyurethane backing → No fly ash → No PFAS
Carpet → With vinyl or polyurethane backing → With fly ash → With PFAS

Flooring Products Hazard Spectrum

New Formulations of Vinyl Floors → Phthalate-free
New Formulations of Vinyl Floors → No intentionally added phthalates → With post-consumer recycled content
Traditional Vinyl Floors → Intentionally added phthalates
Traditional Vinyl Floors → Intentionally added phthalates → With post-consumer recycled content

HEALTHY BUILDING NETWORK

Resilient Flooring

Linoleum
Solid Wood Floors (pre-finished)
Engineered Wood Floors (pre-finished)
Ceramic Tiles (made in the USA/lead-free)
Solid Wood Floors (finished on-site)
Biobased Floors
Rubber (without crumb rubber)
Laminate
Carpet (no fly ash, no vinyl or PU, no PFAS)

HEALTHY BUILDING NETWORK

Case Study

CASE STUDY

Dublin Crossing

DUBLIN CROSSING, NON-PROFIT SENIOR HOUSING, MANKATO, MINNESOTA

PRODUCT CATEGORIES

FLOORING

J&J ENVISION CARPET TILE – INCOGNITO MODULAR, INDEX MODULAR, AND KINETEX UMBRA

FORBO MARMOLEUM MODULAR AND ALLURA LVT

CABINETRY & MILLWORK

SMART CABINETRY KCMA AND ESP CERTIFIED NAUF

DOORS

LYNDEN GREENDOR, NAUF, FSC

PAINT

LOW VOC SHERWIN WILLIAMS PRO-MAR 200

Dublin Crossing is a 50-unit, 3-story affordable workforce housing development in Mankato, Minnesota. Developed by CommonBond Communities, the project includes 100% affordable units to house families and formerly homeless with one-, two-, and three-bedroom apartments. Amenities include a playground, community room with serving kitchen, patio with grilling station, and computer lab. The development meets Enterprise's Green Communities Criteria with the Minnesota Overlay.

The timing of HomeFree's partnership with CommonBond Communities was serendipitous. At the time CommonBond—the developer, owner and operator of over 6,000 affordable housing units—was undertaking a review and update of the standard material specification for their whole portfolio for new construction and maintenance of their buildings.

The existing standard specification, which meets the Enterprise 2015 Green Communities Criteria, was a strong foundation on which to build. Benchmarking their current practice against the HomeFree hazards pectrums, they realized that many of the recommendations were already included in their current practice. This includes low-VOC paint, and doors and millwork using NAUF (No Added Urea Formaldehyde) composite wood products.

FOCUS ON FLOORING

Employing the Dublin Crossing project as an opportunity to explore alternative flooring options, the project archi-

homefree.healthybuilding.net

HomeFree

CommonBond (non-profit)
New Construction, 3 Story, 63 Unit

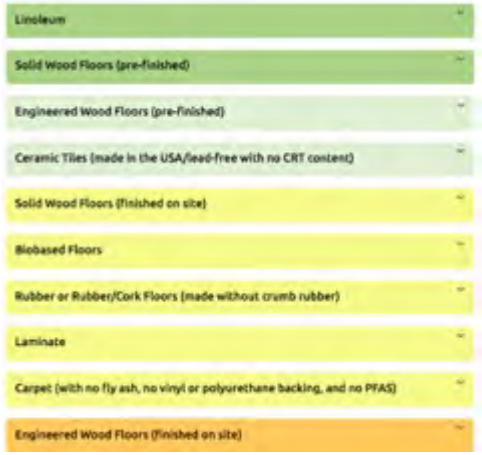
Sustainability Requirements
Green Communities w/MN Overlay

Used –
J&J Envision Carpet Tile –
Incognito Modular, Index Modular,
And Kinetex Umbra

Forbo Marmoleum

Modular And LVT

Tools and Resources



Products

Flooring
Paint
Drywall
Countertops
Cabinetry & Millwork
Insulation
Flooring Adhesives
Sealants

Baseline Specifications

California
Louisiana
Minnesota
Pacific Northwest
Washington, DC
Metro

Case Study

Demonstration Projects

Courses

Why Materials Matter

Product Level
Paint
Insulation (June)

HomeFree Resources

WEBSITES FROM HBN

Healthy Building Network

HomeFree

HomeFree Campus

INSULATION REPORT AND SPEC GUIDANCE

Making Affordable Multifamily Housing More Energy Efficient: A Guide to Healthier Upgrade Materials

Guidance for Specifying Healthier Insulation and Air-Sealing Materials

KNOW BETTER

William Weber
wweber@healthybuilding.net

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