



tempted by the truth, bitten by the

consequences

The world of
Controlled Transparency,
and how what you don't know
can hurt you.

ecotoxicity



the
truth
not
included

human toxicity



tempted
by
the

truth

Toxicity in building products: the untold story

**Remember asbestos,
lead-based paint
and urea-formaldehyde
foam insulation
and the health
consequence of these
products?**

What you don't know today can hurt you tomorrow

Today's architects and facilities managers are bombarded with more product information than ever before. Does this mean they have the complete truth about the building products they specify?

We believe the answer is no, or at least not yet.

Fortunately, a solution is being developed that will turn today's "controlled" transparency about product hazards into full and free disclosure. This change will come when the building products industry has the fortitude to stop ignoring two vital environmental impact categories:

ecotoxicity & human toxicity.

A promising first step

To its credit, the green building industry has already made some progress toward avoiding the consequences of "controlled" transparency. Manufacturers are now in the process of moving past attribute-based point systems like the current and past versions of LEED (and all the greenwashing we've witnessed) toward the use of the Environmental Product Declaration (EPD). An EPD gives decision makers a set of specific facts about a building product, in the same way a nutrition label informs us about the fat and cholesterol in the foods we eat. Unfortunately, there are serious omissions in the data found on most EPDs. They ignore two critical issues: the impact of products on the health of humans and their environment.

An Inconvenient Truth...

Ecotoxicity and human toxicity measures are absent from the current flooring Product Category Rules (PCRs) that today's EPDs are based on. This is no accident, and it is as serious as omitting fat and cholesterol from a junk food nutrition label. Some building products manufacturers don't want to create full, objective and transparent standards that disclose how their products affect living things. Instead, they've chosen to sidestep the issue of toxicity by citing disputes over measurement methodology. The fact is, they would simply prefer to ignore product toxicity issues instead of dealing with them. . . and they hope you will ignore them, too

...and its Consequences for you, and for all of us

To see the potential consequences of this rationale, simply look back at the building products industry's history. Remember asbestos, lead-based paint and urea-formaldehyde foam insulation? The health consequence of these products, once considered perfectly safe, has been tragic. The financial consequences connected with abatement have been equally disastrous. We believe that greater candor now can help make future tragedies like these far more avoidable.



FLOORING SYSTEMS

HPD to the rescue

There is clearly a need for a new standard product declaration that fully discloses the impact of a product on all living things, from people and plants to bugs and bacteria. In response to this need, we have joined a group of leading architects, building managers and product manufacturers who are working together to create a whole new standard. The new Health Product Declaration (HPD) will complement the existing measures in the EPD with use phase ecotoxicity and human toxicity data, creating a report that gives a clearer, more consistent picture of a product's true environmental impact. We eagerly await the day when the HPD will be the building industry's de facto standard, and when decision makers can know all the ways a building's

contents will impact the people who live or work in it.

Toward transparency: what the industry must do

The most important breakthrough of all needs to happen in the hearts and minds of our green building colleagues. Everyone in the building products industry, from architects and specifiers to construction professionals, building managers and product manufacturers, will need a change in mindset. This new perspective asks us to consider all the ways a product can contribute to a healthier environment.

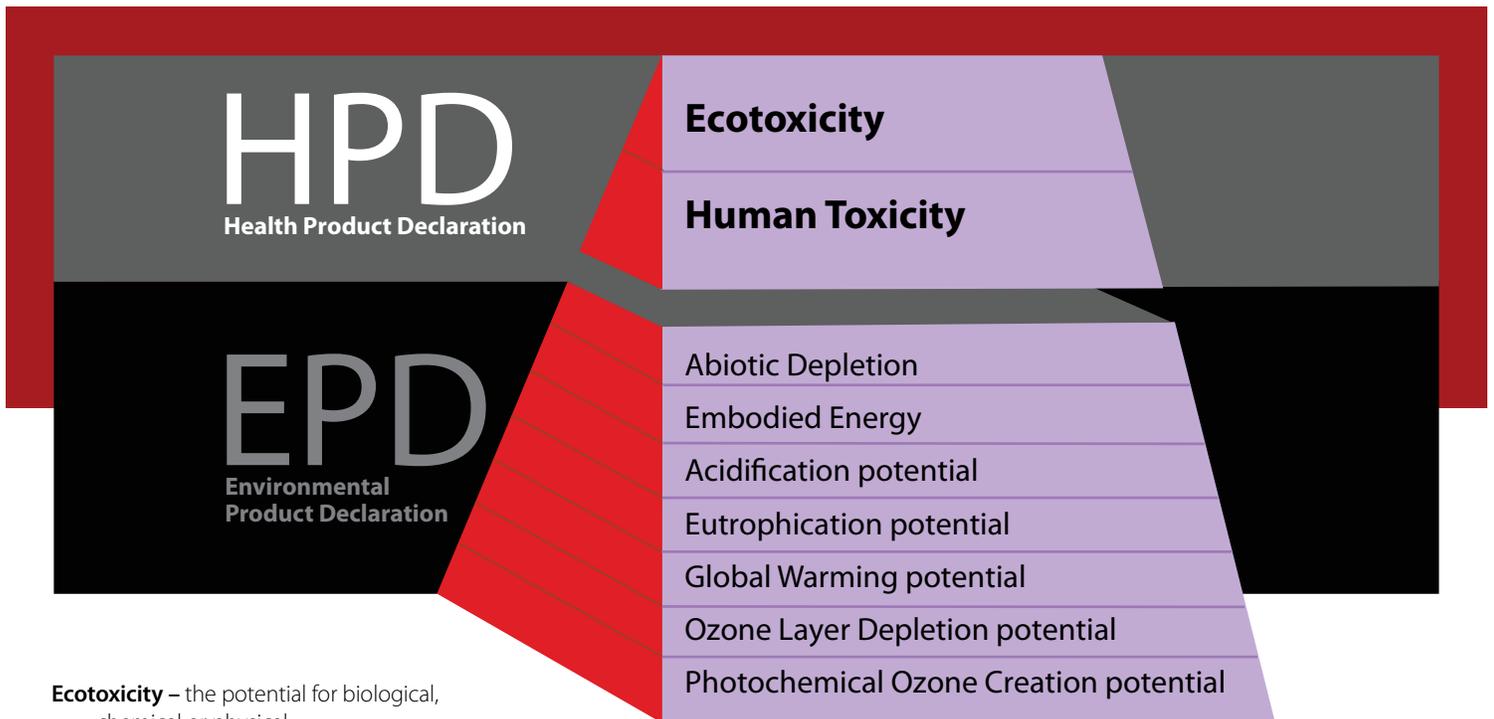
- Is it sourced from sustainable materials?
- Is it designed to minimize construction waste?
- Does it emit compounds that might impact human health?

- Are excessive amounts of energy or scarce raw materials used in its creation?
- Can it be safely removed and naturally recycled at the end of its working life?
- Will its performance attributes contribute to a more energy efficient, healthy living space?

In short, we must move from products with sustainable attributes meant to contribute to "points" and strive to create truly sustainable products. Until we adopt a more holistic and fundamentally health-centered way of looking at what goes into a building, we run the risk of perpetuating the toxicity that has been a regrettable part of life in past generations.

This goal is well worth striving for.

HPD: the missing capstone of a complete declaration program



Ecotoxicity – the potential for biological, chemical or physical stressors to adversely affect ecosystems

Human Toxicity – the likelihood of an environmental toxicant to have an adverse effect on human health

Abiotic Depletion – consumption of non-renewable resources (oil, gas, coal, metals, etc.)

Embodied Energy – total energy expended on sustaining a product through its

complete life cycle, from raw material extraction through manufacturing, transport and disposal at end of life

Acidification potential – the potential for the product to contribute to acid rain

Eutrophication potential – the product's contribution to water or soil nutrients that cause algal blooms

Global Warming potential – emissions of carbon dioxide or methane that affect the earth's atmosphere

Ozone Layer Depletion potential – reduction in environmental ozone cause by chlorofluorocarbon emissions

Photochemical Ozone Creation potential – contributions to smog caused by hydrocarbon emissions



environmental commitment

Compliance Plus – the Forbo Commitment

The new Health Product Declaration (HPD) reporting standard is still in development, but Forbo has decided not to wait. We are introducing a new edition of EPD documents on our flooring products at Greenbuild 2012, and each contains information on all phases of their LCAs including an addendum that approximates the new HPD standard as closely as it possibly can.

This willingness to go beyond government regulations and requirements is part of a long-standing Forbo commitment we call Compliance Plus. It's an initiative that includes sharing complete Life Cycle Assessment (LCA) data with our stakeholders. LCAs allow decision-makers like you to

sustain

assess our products' environmental impact from beginning to end... from extraction of its raw materials to safe recycling of the product after its useful life is over. Complete transparency is our goal, both in our own products and as an advocate in our industry worldwide. It's all a part of striving for the highest standard: the ultimate betterment of the environment in which our products exist, and the best possible outcome for the people, plants and animals with which they live.

The task is yours, and the time is now. At stake: the future of our industry, and the health of generations to come

The people of Forbo believe that sustainability and environmental stewardship shouldn't wait. We also believe they shouldn't cost more.

We act on this belief by creating products that improve your environment, while also improving your bottom line. The real profit comes in the next fiscal quarter, and in the lives of our children and grandchildren.

Join us in this quest to make a difference. Learn more by visiting our web site at :

www.forboflooringna.com/Environment/truth



creating better environments

Forbo Flooring Systems is the global market leader in commercial floor covering solutions. Marmoleum, our flagship brand, owns a global linoleum market share of over 60%, while Flotex dominates the rapidly growing flocked flooring market with over 90% global market share. In addition to linoleum-based products, Forbo develops, manufactures and markets a diversity of high quality vinyl and textile floor coverings and Coral & Nuway entrance system solutions.



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