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# Groups Looking At Ways To Measure Chemical Footprints



By **Scott Kriner, Green Metal Consulting**

How Many Footprints Do You Have?

As sustainability issues became more prevalent in the building construction industry we were introduced to the concept of determining a Carbon Footprint of a building.

This was related to the amount of CO<sub>2</sub> being emitted into the atmosphere as a result of the energy used to build a structure and for the operation of that structure. Buildings were analyzed for their overall Environmental Footprint, using various impact categories. Later we learned about how buildings can have a Water Footprint, and even a Waste Footprint for buildings.

So it is not too surprising to learn about recent efforts to create a Chemical Footprint program. Over the past few years the impact of chemicals of concern in building materials became the latest topic in the transparency and reporting aspect of green buildings. That spurred the formation of the Health Product Declaration (HPD) Collaborative. And it triggered an attempt to create an ASTM Standard on a similar program called the Product Transparency Declaration. Both of those programs generate a list of chemical ingredients in a building product and flag any chemicals at certain levels that may be of concern. Specifiers, architects and building owners are interested in this aspect of chemicals in the products that make up the building.

Other organizations have rallied behind the chemicals of concern subject, such as LEED, GreenScreen, Cradle2Cradle, and UL Environment. Some major architectural firms have created their own "Red Lists" of chemicals that they will not include in their building projects. Other lists include California's Prop 65, REACH and the California Candidate Chemical List.

The launch of the WELL Building Standard is another sign of the shift toward transparency related to issues that could be detrimental to health and wellness of the building installers and occupants. The WELL standard addresses all aspects of air, water and chemical safety in a building, and highlights the impacts on various systems in the human body. The standard is designed to potentially be integrated into green building rating systems such as LEED.

Enter the Chemical Footprint Project (CFP), which was launched in December 2014. A pilot phase was conducted with 11 major corporations and proved the validity of the project to assess a company's strategies and policies related to chemicals of concern. The Assessment tool used in the pilot program was sent out for public comments in January 2015.

The Steering Committee of the CFP includes the likes of Staples, Target, Kaiser Permanente, Boston Common Asset Management, USGBC, the Environmental Defense Fund, and Trinity Health.

The CFP provides an assessment tool for companies to rate their management strategies, policies and procedures with regard to Chemicals of High Concern in products that they use or purchase. Their list of Chemicals of High Concern is based on the European REACH program and the California Candidate Chemical List.

Using a questionnaire with multiple responses in four different Elements, the tool captures a company's management strategy, chemical inventory, public disclosure attempts, accountability, third party verification, quality control, and a Chemical Footprint measurement. More information can be found at [www.chemicalfootprint.org](http://www.chemicalfootprint.org).

Another sign of the growing importance of transparency related to chemicals in the building construction industry is the effort of the American High Performance Building Coalition (AHPBC). The AHPBC is composed of over 40 leading organizations representing a range of products and materials related to the building construction industry. Their goal is to support the development of green building standards through consensus-based processes derived from data and performance-driven criteria.

The AHPBC is closely aligned with the American Chemistry Council (ACC). Members of the AHPBC, which includes the Metal Construction Association, are also members of the ACC's "Better Chemistry for Building Construction" (BC2) organization. The BC2 is developing scientific and practical communication, promotion, and resources related to chemicals in the building construction industry. Tools are being developed that could help to analyze more than just the hazard of a chemical, but also the exposure and risk criteria for a chemical

of concern. Educational tools, webinars, presentations, and cooperative projects with USGBC and ULe are beginning to address chemicals of concern in a more scientific and objective manner. A presentation on their work with the building construction industry will be part of the seminar series at this year's METALCON conference and Expo in Tampa, FL. ([www.metalcon.com](http://www.metalcon.com))

So on top of Carbon Footprints, Environmental Footprints, Water Footprints and Waste Footprints, we can now determine a company's Chemical Footprint. The disclosure of chemicals in building products, as well as their hazard, risk and exposure issues will become part of the overall transparency of what is in the materials that we use for construction.

We are already seeing the Environmental and Energy aspects of LEED being crowded by other issues such as chemicals of concern, or health and wellness of building occupants. What is next?? Stay tuned.

*Scott Kriner is the president and founder of Green Metal Consulting Inc. He is a LEED Accredited Professional who began his career in the metal construction industry in 1981. His company is a member of the U.S. Green Building Council, the California Association of Building Energy Consultants and the Residential Energy Services Network (RESNET). Scott can be reached by email at [skriner1@verizon.net](mailto:skriner1@verizon.net) or by phone at (610) 966-2430. You can also visit him on the web at [www.greenmetalconsulting.com](http://www.greenmetalconsulting.com).*

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