

# North American "Three-PD": an industry first!

*Unpacking the importance of EPDs  
for tile, mortar and grout*

*By Bill Griese, LEED AP BD+C,  
director of Standards Development  
and Sustainability Initiatives,  
Tile Council of North America*



## **Big news: two additional EPDs round-out the EPD trifecta**

At Coverings 2016, Tile Council of North America (TCNA) announced an industry first: the completion of two industry-wide Environmental Product Declarations (EPDs) for tile mortar and tile grout made in North America, which when used along with the existing EPD for North American-made ceramic tile, provide the environmental impact of the full installed system.

The EPD for North American-made ceramic tile, which was released in 2014, is a 23-page report containing a comprehensive disclosure of the environmental impact of over 95% of the ceramic tile produced in North America. Representing approximately 2.5 billion sq. ft. of tile, the following manufacturers contributed data to the study: Arto, Crossville, Dal-Tile Corporation, Florida Tile, Florim USA, Interceramic, Ironrock,

Porcelanite Lamosa, Quarry Tile Company, StonePeak Ceramics and Vitromex de Norteamérica.

Similarly, the two new EPDs for North American-made mortar and grout provide lifecycle-based data on the vast majority of the main materials used to set tile, representing over 2.25 billion kg. of products produced annually in North America. The following mortar and grout companies contributed data to the study: Ardex, Boxel, Bostik, Crest, Custom Building Products, HB Fuller/TEC, Interceramic, LATICRETE, MAPEI and Cemix/Texrite.

## **What are EPDs, and why are they important?**

Product selection is a major component in green building. Products can impact the environment in different ways, and it is important to understand the variety of contributions by all products. The sus-

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tainability of a product involves much more than recycled material content, energy efficiency, or any other single attribute. Conformance to multi-attribute sustainability performance thresholds and whether environmental information is transparently reported should be considered when evaluating a product's true sustainability. Additionally, how

products combine into installed product systems is important.

Product conformance to the North American tile industry's standard for sustainability, Green Squared®, is a good indicator of sustainability performance. With regard to transparency, EPDs are the most common vehicle for appropriately communicating environmental information.

An EPD provides a comprehensive overview of how a product impacts the environment – specifically, global warming, abiotic resource depletion, acidification, smog formation, eutrophication, and ozone depletion. The primary intent of an EPD is transparency, and while developed within a standardized reporting framework, the EPD itself does not indicate conformance to any particular environmental performance threshold(s). Just as nutrition labels inform with respect to food choices, an EPD informs with respect to sustainability.

The industry-wide EPDs for North American-made tile, mortar and grout are based principally on lifecycle assessments that address myriad aspects: sourcing and extraction of raw materials; manufacturing processes; health, safety and environmental aspects of production and installation; production waste; product delivery considerations; use and maintenance of the flooring; and end of product life options such as reuse, repurposing, and disposal. Each of these three EPDs provides 60-year

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environmental impacts, per square meter of installed product, based on “cradle-to-grave” LCA (life cycle assessment) data submitted by participating companies. Additionally, product-specific (proprietary) EPDs may be available from each of the participating companies.

All three industry-wide EPDs are based on a comprehensive analysis by thinkstep, Inc. (formerly PE International) and have been independently certified by UL Environment. Both thinkstep and UL Environment are well-established leaders in the field of sustainability assessment and validation. This means there is no “greenwashing” and that a formal account of the true environmental impact of tile, mortar and grout is provided and has been critically reviewed and

*EPDs for tile, mortar and grout provide specifiers and green building professionals with the information they need to understand the environmental impact of the fully-installed system. For more information and to download copies of all three North American industry-wide EPDs in their entirety, visit [www.TCNATile.com](http://www.TCNATile.com).*

verified by independent third-party experts.

**Relevance of EPDs for tile, mortar and grout**

The tile industry’s three EPDs are valuable resources for many reasons. EPDs provide manufacturers opportunities to see where they stand relative to the industry average, and allow a means to assess progress toward continuous improvement. Also, LCA data from the EPDs can be extracted to



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populate product information databases. Such databases are being used increasingly today by A&D and building life cycle experts for Building Information Modeling (BIM) and to make informed product decisions.

Furthermore, the three EPDs showcase the industry's minimal environmental impact. For example, the industry-wide tile EPD, though it does not itself draw conclusions or report on ceramic tile's environmental performance relevant to competitive surface materials, tells an interesting story when reviewed side by side with publicly available EPDs of other flooring products. When compared to other product EPDs, ceramic tile has the lowest 60-year environmental impact per square meter. Similarly, the industry-wide EPDs for mortar and grout report very low 60-year environmental impacts per installed square meter.

With regard to green building, the industry-wide EPDs for North American-made tile, mortar and grout are important tools for architects and specifiers who wish to use tile to satisfy green building project requirements. A product manufactured by any of the manufacturers who contributed data to these EPDs can contribute toward points and/or satisfy the criteria of virtually every North American green building standard and rating system: LEED, Green Globes, NAHB National Green Building Standard, ASHRAE 189.1, International Green

Construction Code, CalGreen, CHPS and GSA Facilities Standards for Public Buildings.

Also, having submitted data for the industry-wide EPDs, many participating manufacturers have already or will soon start to develop and release product-specific EPDs, which could potentially qualify those products to additionally contribute toward points and compliance in green building.

But, the most exciting aspect of the tile industry's *EPD trifecta*? As most green building standards, codes, and rating systems provide incremental credit for each product that is addressed by an EPD, joint use of EPDs for tile, mortar, and grout means that a single tile installation could potentially contribute "triple!"

### Moving Forward

Publicly-available North American industry-wide EPDs for tile, mortar, and grout, when used together, can provide in-depth environmental data and paint a clearer picture of the life cycle environmental impact of a tile installation. With the transparency provided by EPDs for the main materials used to install tile, along with the multi-attribute performance thresholds of Green Squared® which have been established for several years, specifiers are fully equipped with the information they need to specify green tile industry products in 2016 and beyond.