

Green Globes®: Differences from LEED® and how tile fits in

Green Globes has emerged as a viable alternative to LEED, and tile is perfectly poised to contribute toward points and compliance with its comprehensive ‘performance plus transparency’ initiatives, Green Squared® and the North American-made Ceramic Tile EPD

by Bill Griese, LEED AP BD+C



As “interior fit-outs,” Green Squared Certified® tiles (shown) and tiles covered by the North American tile EPD can contribute toward the related requirements and minimum thresholds for earning Green Globes points.

If you’ve been involved in green building, you’ve likely heard of LEED®, which stands for Leadership in Energy and Environmen-

tal Design. You probably know that LEED is the primary initiative of the U.S. Green Building Council (USGBC) and one of the most popular rating

systems and certification programs for green buildings. It is also possible that you’ve heard of Green Globes®, a rating system and certification program that



When used on an exterior facade, Green Squared Certified® tiles and tiles covered by the North American tile EPD can contribute toward earning Green Globes points for use of “core and shell” materials with an EPD and/or multi-attribute sustainability certification.

many view as a comparable alternative to LEED.

But even if you've heard of Green Globes, which is very similar to LEED and has origins dating back to around the same time LEED was created, chances are you are less familiar with it than you are with LEED. LEED and Green Globes are both widely used to certify green grocery stores, healthcare facilities, schools, government buildings, data centers and banks throughout the U.S. and Canada.

Green Globes certification of environmentally sustainable buildings is, like

LEED, based on a host of criteria -- ranging from sustainable sites to materials and resources to energy efficiency. A new or existing building's environmental impact assessed in accordance with the Green Globes criteria can earn points toward four different levels of certification, from One Globe to Four Globes.

Green Globes sustainability criteria originated from BREEAM (Building Research Establishment Environmental Assessment Method), a standard developed in Great Britain in the early 1990s around the same time LEED was being

developed in the U.S. BREEAM was brought to Canada in the mid-1990s, and after a few modifications, it was reintroduced as Green Globes by the Canadian Building Owners and Managers Association in the early 2000s. Its emergence in the U.S. began in 2004 when the U.S. rights to Green Globes were acquired by Green Building Initiative (GBI) in an effort to provide an equally stringent alternative to USGBC's LEED.

GBI continues to manage Green Globes technical criteria and certification processes. While there are many technical similarities between Green Globes and LEED, GBI touts Green Globes as a more streamlined and affordable alternative. The Green Globes Technical Reference Manuals for certification are based on American National Standards Institute (ANSI) standard ANSI/GBI 01. While USGBC and GBI are both ANSI-accredited standards developers, ANSI/GBI 01, unlike the technical criteria contained within the LEED rating system, is a product of ANSI's consensus requirements.

Over the past decade, LEED has certainly been more mainstream than Green Globes, but to accommodate the continued growth in demand for green building in North America, many in green building have taken a closer look at Green Globes. In 2012, a report prepared for the General Services Administration under contract with the Department of Energy reported that Green Globes aligned well with federal requirements for new construction. In January of 2014, the GSA approved Green Globes as an acceptable alternative to LEED. Later in 2014, Drexel University's College of Engineering released a study that supported Green Globes as a cost-effective alternative to LEED, and Turner Construction subsequently reported in its “Green Building Market Barometer” that interest in Green Globes and other alternatives to LEED was up 250%.

So what does all of this mean for the tile industry? The answer is simple: Don't focus exclusively on meeting the green product demands associated with LEED to the detriment of other programs. While arch-reps seemingly continue to be inundated with predominantly LEED-related inquiries, the number of questions about

product conformance to other project requirements or alternative rating systems will likely increase. From marketing and education, to investments in technology, to deciding upon which product labels and sustainability attributes best resonate with green architects and specifiers, it is important to understand that things are changing, and green building doesn't all begin and end with LEED.

Perhaps one of the biggest advantages for the tile industry is that its major sustainability initiatives are not only fundamentally aligned with the requirements of LEED, but also with Green Globes and other emerging green building rating systems and certification programs. In fact, building product criteria in Green Globes align almost perfectly with the concept of "performance plus transparency," an increasingly widespread trend in building product selection and specification to which the North American tile industry has paid close attention.

For tile sold in North America, requirements for "performance" are packaged neatly into the Green Squared® standard, ANSI A138.1. Green Squared is a certification program developed exclusively for tiles and related installation materials. Products that bear the Green Squared Certified® mark meet the broad array of multi-attribute sustainability criteria specified by ANSI A138.1. Green Squared addresses everything from raw material extraction to end of product life management and is a true cradle-to-grave performance standard that eliminates the need to cross evaluate single-attribute sustainability claims.

"Transparency" for tile manufactured in North America is provided in the form of an industry-wide Environmental Product Declaration (EPD). This EPD is a comprehensive generic overview of how North American-made tile impacts the environment and is based on a third-party life-cycle assessment (LCA) of virtually all tiles produced in North America. It addresses the most important environmental considerations affecting the well-being of the planet and those who call it home -- specifically, global warming, abiotic resource depletion, acidification, smog formation, eutrophication, and ozone depletion. Just as nutrition labels inform the calorie conscious on food

choices, the North American tile EPD informs with respect to sustainability.

Green Globes directly integrates multi-attribute performance and transparency into its provisions for sustainable building product specification. Tiles with Green Squared certification, as well as tiles covered by the North American tile EPD, can play a significant role in helping a building achieve Green Globes certification. Tiles that are both Green Squared Certified and covered by an EPD can play an even larger role.

Under Section 3.5 of Green Globes for New Construction, Technical Reference Manual v1.3, up to 30 points are available for building products with EPDs and/or certification to multi-attribute sustainability standards. Points are awarded based on the percentage of products used (based on cost) and where they are used. For a building's core and shell, a maximum of 20 points can be earned if 40% of building products conform to the EPD and/or multi-attribute certification requirements; 15 points if 25% of products conform; and 10 points if 10% of products conform. For a building's interior fit-outs, a maximum of 10 points can be earned if 40% of products conform; seven points if 25% of products conform; and five points if 10% of products conform. Using ceramic tiles covered by the North American tile EPD and/or tiles that are Green Squared Certified can

contribute to the requirements of Green Globes in direct proportion to the tile's value. Contribution toward points can be doubled by using tiles that are both Green Squared Certified and covered by an EPD.

LEED is still the proverbial 800-pound gorilla in the green building marketplace. Nevertheless, Green Globes, which is being promoted by GBI for its affordability, user-friendliness and ANSI accreditation of the standard on which it is based, is a program that shouldn't be ignored. As recently as late 2014, the Federal Government formally acknowledged Green Globes as a viable alternative to LEED, and one can presume that Green Globes will also gain traction in the private sector and continue to grow.

The tile industry is in good shape. It is well-equipped with leading initiatives to continue satisfying the diverse and stringent demands associated with LEED, and also has the tools needed to satisfy the consolidated "performance plus transparency" provisions that are at the core of Green Globes' material specification principles. The tile industry's multi-attribute performance standard, Green Squared/ANSI A138.1, and its transparency report, the North American tile EPD, are sure to receive more attention as LEED evolves and as alternative programs such as Green Globes become more popular. **TILE**

ABOUT THE AUTHOR



Bill Griese, Director of Standards Development and Sustainability Initiatives for the Tile Council of North America, is involved in the development and revision of ASTM, ANSI, ISO, and other industry-specific standards and the direction of TCNA's sustainability efforts. Additionally, he works closely with TCNA's Product Performance Testing Laboratory.

Griese served two consecutive terms as Chairman of ASTM Committee C21 on Ceramic Whitewares and Related Products and currently serves as Chairman of ASTM Subcommittee C21.06 on Ceramic Tile. Additionally, Griese is active in ASTM Committee E60 on Sustainability, and serves as an appointed member and Chairman of ASTM's regulatory Committee on Technical Committee Operations (COTCO). In 2013, he was selected by ASTM President James Thomas as a recipient of the ASTM International President's Leadership Award.

Griese is an active participant in the World Ceramic Tiles Forum and serves as a U.S. delegate in several global standardization initiatives. Each year, he speaks at industry events in the U.S. and abroad, and he is a regular author and columnist in several industry publications.

Griese is a LEED Accredited Professional (LEED AP) with a specialty in Building Design and Construction (BD+C). He earned a Bachelor of Science degree in Ceramic and Materials Engineering from Clemson University in Clemson, SC.
