

PIMA Completes ISO 14044-Compliant LCA for Polyiso Building Insulation

BETHESDA, Md. — As part of its ongoing efforts to promote environmental awareness and reporting transparency, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has recently completed a comprehensive Life Cycle Assessment (LCA) of polyiso building insulation conducted in accordance with ISO 14040. According to Jared Blum, President of PIMA, the LCA is fully compliant with the requirements established by ISO 14044, including independent peer review. "We are the first non-structural insulation that has finished a life cycle analysis with third-party verification," Blum said. "PIMA is the first industry group that has done an LCA in accordance with ISO."

The PIMA LCA will serve as a template for PIMA members to report the environmental attributes of individual polyiso products in compliance with requirements for Type III Environmental Product Declarations. At this time, the PIMA LCA is the first ISO 14044-compliant LCA conducted for a non-structural building insulation product in North America and the first ISO 14044-compliant LCA conducted to provide a generic baseline for insulation products produced by different manufacturers.

To fully comply with the requirements of ISO 14044, the PIMA-sponsored LCA was conducted by PE Americas, a division of a world-leading environmental consulting firm and the developer of internationally-recognized LCA software tools. The LCA addresses

all critical inputs and processes involved in raw material acquisition, manufacture and transport of polyiso building insulation. In addition, the LCA addresses a broad range of environmental impact categories, including key measures of air and water pollution, energy and resource intensity, environmental toxicity and global warming potential. Finally, the LCA was subjected to a thorough critical review by scientific peers in accordance with ISO 14044 requirements.

The benefits of ISO 14044-compliant LCA are numerous.

- First, LCA offers process consistency and reporting transparency for all building stakeholders.
- For architects and other building designers, LCA offers an opportunity for assessment of material alternatives while serving as a basic building block to evaluate the overall impact of whole-buildings.
- For building product manufacturers and their suppliers, ISO 14044-compliant LCAs establish a reliable initial benchmark for continuous improvement programs to further reduce product environmental impacts.

In addition to the general benefits of LCA, the generic baseline used within the PIMA LCA will help accelerate the reporting of brand-specific LCA data by individual PIMA manufacturing members and serve as the foundation for a new level of product labeling and reporting advocated by leading sustainability experts. This new level of product labeling is called a Type III Environmental Product Declaration (EPD), which is further defined under ISO 14025 and ISO 21930. EPDs are succinct, fact-based documents that provide specific information by category. They require independent validation of a product's environmental impact. As such, EPDs promote greater transparency of important environmental impact information and ease buyers' efforts to make objective comparisons among similar products.

Blum noted that LCAs will be needed in the future, especially with national accounts, in environmentally conscious areas, and in government work. "The future is here," he said. "LCAs have left the station. Industries will need them. PIMA has already taken the most rigorous, comprehensive method to get there — a first in the roofing industry."

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